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CALIFORNIA STATE JOURNAL OF MEDICINE

Christmas Greetings

THIS NUMBER concludes Volume XXI of the California State Journal of Medicine and twenty-one years in the service of medical journalism. The files show a record of continuous improvement in the quality, size and usefulness of the Journal. Its various volumes and numbers indicate the progress in medical education, the practice of medicine, and public health in this state, and they chronicle the growth of membership in the State Medical Association. The California Medical Association was organized in 1856 with a few members and has steadily grown until there are now 3767 members. During the past year the Journal has become the official publication of the Nevada State Medical Association and the Utah State Medical Association. It will serve the membership of these two great organizations in exactly the same way as it serves that of California. In taking this great step forward, the Journal enhances its value to the individual physician, to medical organization, and to the cause of better medicine to the public. The Journal wishes a *Happy Christmas* and a *Prosperous New Year* to all of its readers

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VOL. XXI DECEMBER, 1923 No. 12

ORIGINAL ARTICLES

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The author of an article appearing in the JOURNAL *is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.*

THE TREATMENT OF HYPERTENSIVE VASCULAR DISEASE*

By WILLARD J. STONE, M. D., Pasadena, California

In articles upon this subject written nearly ten years ago, my main contentions covered the clinical fact, verified upon many occasions, that the majority of all patients manifesting arterial hypertension fell into one of two groups designated as follows: (1) The cardiac type of hypertension, or (2) the cerebro-renal type of hypertension.

It was also suggested that the term vascular disease, as described by Richard Bright in 1836, be used to cover in a broad sense, and until more definite knowledge was available, the symptom-complex of arterial hypertension with its associated or concomitant cardiac, renal, and cerebral symptoms.

A study of the literature of the past two decades has shown that:

1. It has not been proven that arteriosclerosis, many times associated with hypertension, is the cause, *per se,* of this symptom.

2. Many patients with evident sclerosis do not manifest hypertension while arteriosclerosis and nephritis of the vascular type may exist without earlier history of antecedent or concomitant hypertension.

3. Vasomotor spasm involving the smaller arterioles and pre-capillary areas may, however, still be regarded as a tentative explanation of hypertonus.

4. It has not been proven that the primary cause *of the majority of instances* of hypertension has originated in a nephritis. Occasionally, in young individuals an acute nephritis will be observed in which it may be believed, from the evidence, that serious damage has occurred. In such cases, as time elapses and the disturbed kidney function assumes a progressive character, a rise in the diastolic pressure may occur. Under such conditions it may be natural to assume that the cause of the hypertension had its origin as a result of the nephritis. Such a course of events does not, however, occur in the majority of cases manifesting hypertension as a symptom.

5. Nephritis may co-exist or may have resulted from causes which have operated to produce the vascular disease with associated hypertension as a symptom, in the same manner that albuminuria and polyuria may be symptoms.

6. The balance of evidence points to the fact that every patient who has persistent hypertension has suffered more or less renal damage. The extent of the damage may be difficult to estimate, but from a clinical standpoint and its influence upon treatment, such damage may be believed to exist.

7. It has been believed by many investigators that hypertension of itself could not produce arteriosclerosis. That is, given normal vessel walls, it has been believed that other factors were necessary to produce the arterial changes. It has been believed from all the evidence that vessel walls of poor hereditary stock may develop, as the result of a variety of toxins, varying degrees of rigidity and contraction which interfere seriously with the function of a variety of organs; namely, the heart, kidneys, and cerebrum.

8. While it is true that different individuals may possess different degrees of stock in their arterial walls it is also apparent that the care given the stock they possess may be responsible for the length of time it endures for the performance of normal function.

From a practical standpoint and at the risk of empiricism it has appeared best, until more definite knowledge is available, to regard the symptom-complex of hypertension with its associated cardiac, renal, and cerebral symptoms, as part of the manifestations of generalized vascular disease. Such a view has seemed to possess the definite advantage of simplicity, while it serves to eliminate academic

* Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association.

discussion which has not, so far, clarified the situation. With the idea in mind that there may exist varying phases of the same malady it has seemed unnecessary to use the term "primary or essential hypertension." This term lays stress upon and magnifies the hypertensive element of the disturbance, a state of affairs no more warranted than the use of any other symptom at one time or another present during the course of a progressive disease.

THE CARDIAC TYPE OF HYPERTENSIVE VASCULAR DISEASE

Patients who fall into this group manifest the following symptoms:

1. Evidence of vascular changes involving the peripheral arteries. These changes refer particularly to rigidity, but without evidence of contraction of the arterioles.

2. The systolic pressure may be high if the heart muscle is compensating for the added work made necessary in the endeavor to maintain circulatory equilibrium because of rigid inelastic vessels. The diastolic pressure will usually be found to be within normal limits since the lumen of the vessels is not contracted. *The usual pressure ratios will be found to be within the following range: Systolic pressure, 180-200; diastolic pressure, 80-100.* The distinctive feature of this group will be found to be the comparatively low diastolic pressure with an increased systolic pressure.

3. Practically all patients of this group will show cardiac hypertrophy. This has not resulted from peripheral resistance, as measured by the degree of contraction of the vessels, but apparently because of associated changes necessitating increased heart work, such as sclerotic damaged valves, sclerosis of the aortic arch, or as a result of extra-cardiac factors, such as liver cirrhosis, gout, syphilis, or the toxins of a variety of infectious processes which have had direct deleterious effects upon the blood-vessel walls. Prolonged hard physical labor deserves consideration in this connection.

4. The patients of this group do not commonly show symptoms of nephritis, such as nocturia, fixation of specific gravity toward the lower levels, or blood nitrogen retention, especially of creatinin. When albumin and casts are found they have resulted, as a rule, either from stasis due to heart muscle weakness or to vessel changes involving the kidneys; that is, arteriosclerotic changes rather than a true nephritis in the pathological sense of the term.

5. When death occurs among the patients of this group the symptoms and autopsy findings point to gradual or sudden failure of the heart muscle. The systolic pressure may remain high until the heart muscle begins to fail and then falls rapidly as the muscle tone diminishes (the so-called primary high-secondary low sequence).

6. Since the increased systolic pressure may be regarded as a compensatory effort on the part of the myocardium to supply adequately the periphery with blood, treatment should be directed toward maintaining the heart muscle tone. There still exists in the minds of many physicians a digitalisphobia, due to the teachings of earlier text-books, with the result that this valuable remedy is withheld from many patients because of the fear of increasing the blood pressure. Large doses, as given in young individuals for the relief of more acute conditions, should not be used, but, since the purpose in administering any drug is to secure the effect desired, the dosage of digitalis should correspond with the urgency of symptoms. In such a condition as an acute edema of the lungs large doses of a suitable preparation administered subcutaneously, intramuscularly, or intravenously will be necessary to save life. In such an acute condition of heart muscle failure the *intravenous* administration of caffein sodio-benzoate, grains two and one-half, should also be used. Nitroglycerin or other vaso-dilating drugs are rarely indicated, because, according to our present understanding of the physics of the circulation, it should be our aim to assist in maintaining an adequate blood supply to the periphery, which includes the cardiac and respiratory centers in the medulla. In other words, the attempt should be made to sustain the systolic pressure rather than lower it.

7. In general, aside from specific indications noted above, the hygiene of proper living as applied to such patients should receive proper consideration. This refers particularly to food regulation, especially if obesity exists, and the attempted control of this disturbance of metabolism. This will many times involve consideration of a possible hypothyroid state and the determination of the basal metabolic rate. The possibility of hypothyroidism in such patients has not generally been appreciated. The American Actuarial Tables have amply demonstrated the serious influence of obesity upon individuals with disturbed heart function associated with hypertension, since a relatively large percentage of deaths among such individuals occur from so-called heart failure. Many such patients have been excessive users of starch foods. For individuals manifesting anxiety and restlessness with disturbed sleep, mild sedatives are indicated.

THE CEREBRO-RENAL TYPE OF HYPERTENSIVE VASCULAR DISEASE

The patients who fall into this group manifest the following symptoms:

1. A high diastolic pressure as evidence of the contraction of the peripheral vessels. If the heart muscle is compensating for the increased peripheral resistance, the systolic pressure will also be found to be increased. *The usual pressure ratios under such conditions will be found to be within the range—systolic pressure, 180-240; diastolic pressure, 120-150.*

2. Definite evidences of disturbed kidney function or nephritis exist in the majority of patients of this group. Nocturia will usually be found to be present, with a tendency toward fixation of specific gravity toward the lower levels. Periodically, albumin and casts may be found in urine specimens. With disturbed kidney function, there will be difficulty in excreting solids and the tendency to abnormal retention of nitrogen in the blood may be marked. This refers particularly, in the earlier stages of the disease, to uric acid and sugar reten-

tion, and in the later stages to abnormal creatinin retention. The abnormal retention of these substances in the blood surely cannot be regarded as a physiologic condition. While it may be granted "no definite proof exists that a low protein diet is effective in lowering blood pressure or a high protein diet in raising it," [1] the fact remains that when disturbance of kidney function has occurred, as part of the disease process, many patients are benefited by a dietary regime, based upon their metabolic requirements, which takes into consideration a lowered protein and purin intake. In other words, while it may be true that a high protein diet may not be responsible for the development of hypertension *per se*, there can be little doubt that such a diet would be unwise for patients who have developed disturbed kidney function or nephritis as part of their vascular disease. It all depends upon whether the point of view leads one to treat the patient's disturbed physiology or whether one is content to treat the hypertension which, after all, should be regarded as a symptom of the vascular disease.

3. Since evidences of disturbed kidney function exist in a majority of the patients of this group, blood chemistry studies repeated often enough to enable one to judge the extent of disturbed metabolism are of great assistance.

4. In the majority of patients of this group, cardiac hypertrophy will be found. Cardiac symptoms are many times prominent features of this condition, but it has been my experience that a relatively small percentage (10 per cent) of such patients die from the cardiac disability itself.

5. The greatest danger to patients with contracted vessels and high diastolic pressure has, in my experience, occurred from cerebral thrombosis, hemorrhage, or edema frequently designated uremia,

6. On the other hand, despite the evidence of kidney dysfunction or nephritis, anuria has been a relatively uncommon occurrence among patients of this group. The cerebral danger has appeared to be much greater.

7. Whether the cardiac or the cerebral danger is the greater may depend to a large degree upon the localization of vascular weakness. In one patient the cerebral vessels may be less able to stand strain than the coronary vessels.

8. The treatment of patients who manifest symptoms of the cerebro-renal type of hypertensive vascular disease may be so planned as to take into consideration:

a. The correction of disturbed physiology so far as possible by diet, which enables them to live within the functional capacity of their kidneys. This is best secured by a so-called basic-alkali diet [2] with moderate restriction of salt, coffee, and the limitation of tobacco. Under this heading should be included investigation into possible endocrine disturbances, which include determinations of the basal metabolic rate and the consideration of possible pituitary and, at the time of the climacteric, ovarian dysfunction.

b. The regulation of the lives of these patients should be so planned that rest and freedom from worry can be secured if possible. The physician will render a very distinct service if it is possible to secure realization of the fact that former capacities for work should many times be limited. The advice so frequently given to retire from business is particularly unfortunate in many instances, for many such patients may live long lives of continued usefulness if they can be made to realize certain limitations. The best advice for such patients is to continue with their work and play, but to be moderate in all things.

c. Adequate bowel elimination, which is best secured by simple saline laxatives, such as sodium phosphate or magnesium sulphate.

d. Hydrotherapeutic measures, such as the cabinet bath, to secure elimination through the skin once or twice weekly. Such measures should be carefully controlled and not overdone.

e. The use of vasodilators for the relief of cardiac and cerebral symptoms, such an anginoid pains or pressure headaches. Benzyl benzoate has been found of value in the prevention of attacks of angina pectoris or cerebral crises. It should be administered for a long period of time.

f. The use of digitalis is many times indicated for its effect upon the heart muscle when its function is disturbed as a result of overwork due to the increased peripheral resistance (high diastolic pressure). The cerebral symptoms, many times present under such conditions, are the results of heart muscle weakness and inadequate supply to the medullary centers. The fear that the use of digitalis will increase the blood pressure is not founded upon clinical fact or experience. It is to be regretted that more physicians have not realized the value of this remedy when heart muscle weakness develops as an incident in hypertensive vascular disease.

g. Venesection may be of value, especially in plethoric, obese individuals, for the relief of acute symptoms, such as an acute edema of the lungs or right heart dilatation which has resulted from persistent cough incident to the bronchitis of elderly people, or for the relief of cerebral vascular crises.

h. Although much of the present-day radicalism regarding the elimination of chronic foci of infection in tonsils or about teeth may be followed by more conservatism, it must be conceded that it should be the endeavor of the physician to eradicate foci in these or other localities whenever it can be done *without undue risk*. It is impossible to evaluate correctly the results so far obtained as regards life expectancy for such patients.

i. Not the least of the duties of the physician should be concerned with the attempt to allay the fear which many patients with hypertension possess. It has come to pass that nearly every bathhouse

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[1] Quotation from Editorial Discussion, J. A. M. A., 1923 (April 7), LXXX, 1004.

[2] **Basic-alkali foods** are those in which there is excess of base or alkali over acid. The following foods are so classed as based upon the ash analysis of Sherman and Gettler and have been tested on man by Blatherwick. **Fruits:** Raisins, muskmelons, dried pears, oranges, currants, bananas, lemons, peaches and apples. **Vegetables:** Lima beans, dried beans, beets, carrots, celery, lettuce, potatoes, cauliflower, cabbage, radishes, turnips, asparagus. **Nuts:** Almonds and chestnuts. **Miscellaneous:** Cow's milk.

The following are classed as **neutral foods** and may be freely used by the patient: Sugar, cornstarch, tapioca, lard, cream and butter.

attendant or cultist of mediocre education has a blood pressure apparatus, the use of which may be believed to exist not so much because of knowledge enabling the user to judge of the problem, but rather because of a desire to appear interested. So far as that is concerned, I can see no valid reason why the use of a blood pressure apparatus should not be permissible just as it is permissible to use a clinical thermometer. The use of both may indicate progress, but after all it is proper interpretation in the use of either instrument that counts. Patients should be made to realize that physicians are coming to a better understanding of the problem, and that they are gradually getting away from the bugaboo of high blood pressure as an entity. May the day soon pass when patients are told that their blood pressures are high, and may they be made to believe that the hypertension phase of their malady is no more important than other aspects of a generalized disturbance not perhaps apparent to them.

(Security Building.)

DISCUSSION

George E. Ebright, 209 Post Street, San Francisco—Dr. Stone is to be congratulated upon the concise and scholarly presentation of a subject, the importance of which is measured by the tremendous number of people suffering from the condition of which he treats. Vascular disease associated with hypertension might seem to be, in a figurative sense, the bodyguard of the Great Reaper which is thrown into the fray against human life after the front line division of infectious diseases, preventable diseases and other accidents had failed of their object during the youth and middle life of the army of human individuals. That the attack upon the integrity of the vascular system is a thing the brunt of which is borne by pre-senile and senile individuals. That therefore, hypertensive vascular disease and senility are in more than a restricted sense synonymous.

Dr. Stone observes it has not been proven that arteriosclerosis is the cause of hypertension. He could go farther and say that hypertension precedes arteriosclerosis in most cases and that the factors which produce hypertension plus the increased load upon the arteries and the heart of heightened blood pressure have as their result deteriorated vessels. The interesting point is the question of the original cause of hypertension, and it must be confessed that our present state of knowledge upon the subject does not permit a complete answer to the question. A few points, however, are of interest. During the examination of recruits in the draft of the army during the recent war it was observed that men apparently healthy under the age of thirty presented themselves with high blood pressure. Inasmuch as these men had been called from their usual activities and occupations to embark upon a long and hazardous expedition, it was natural that their departure should be attended with unusual feasting and general overtaxing of the alimentary function. The examining surgeons soon learned that a dose of salts and an abstemious diet promptly resulted in the re-establishment of normal blood pressure. It is repeatedly observed, moreover, that men of great mental activity and responsibility and of sedentary habits present high blood pressure long before there is deterioration of either blood vessels, heart or kidneys, and that regulation of their lives, in which attention is paid to proper recreation and lightening of the work of the digestive tract, results in correcting the vascular tension. I have often seen an association between prolonged mental worry and hypertension. Very possibly the link between the two consists of derangement of the digestive function upon the basis of nervous influences. It is interesting also to observe that many such people with essential hypertension present an increased basal metabolic rate. Enough evidence is before us, I believe, to emphasize the fact that a consideration of the function of the digestive system deserves attention in contemplating the various causes of vascular hypertension, and that vascular hypertension must be considered always as a menace to the integrity of the blood vessels, heart and kidneys.

Dr. Stone (closing)—While it is probably true, as Dr. Ebright has stated, that hypertension may precede arteriosclerosis in some instances, it should be emphasized that arterial rigidity is a natural sequence of the passage of time for every individual. The vast majority of individuals who reach the age of 60 years have undoubted arterial rigidity, and yet many of them do not have hypertonus. In other words, a condition rather than a disease is present.

Hypertonus only occurs, according to my conception, when the smaller arteries are contracted. They may also be rigid and definite arteriosclerosis exist, but the essential thing is that their lumen is contracted. This indicates a pathologic state rather than a condition associated with advancing years.

It is of importance, clinically, to differentiate these two types, for not only is the treatment dependent upon an understanding of the basic disturbance, but the prognosis as well.

Some Problems of Medical Journalism—Colorado Medicine publishes a very interesting article entitled, "Editing the Journal." In this article attention is called to the amount of work, initiative and system required in producing the ordinary medical journal. This is followed through from the selection of material, known as copy, which is to be edited, oftentimes rewritten, the preparation of editorial matter which the editor must either extract from his own brain or extract from the brains of obliging confreres, the procuring of news items gathered from all quarters of the State and in a variety of ways, the correction of galley proof, arranging of material into form proofs, making up the index, and last but not least, getting the journal addressed and into the mails so that everyone entitled to the current number will receive it. This does not include the procuring of advertising, arranging it in the proper form, and elimination of advertising that is objectionable in the advertising copy.

Any State journal can be made better if the editor has the assistance and co-operation of the profession. Contributors can make it easier if they will take the trouble to have their articles not only typewritten but carefully edited as to grammatical construction, paragraphing, punctuation, and attention to clarity and conciseness of expression. Secretaries of county medical societies can help the Journal as well as their organizations if they will furnish condensed reports of the meetings of their respective organizations, together with abstracts of the more important papers. News notices, especially those relating to deaths, marriages, removals, and other occurrences of especial interest to the physicians of the State, must be obtained through officers of medical societies, individuals, or from the more uncertain news clipping bureaus. If these items could be sent in by those who are most familiar with them, it would add to the completeness of the Journal. Finally, the editor needs helpful assistance from those who can render it, and at all times he welcomes constructive criticism and suggestions to aid him in betterment of his work. It is presumed that the editor of each medical journal tries to produce a periodical which is a credit to him as well as to the association which he represents, and he will do his best when he knows that he has the encouragement and co-operation of the entire medical association, for that stimulates him to his best efforts.—(Editorial, Journal Indiana Medical Association.)

DIET ADJUSTMENT AND INSULIN THERAPY IN DIABETES MELLITUS*

By ERNEST S. du BRAY, M. D., San Francisco
(From the Department of Medicine in the University of California Medical School.)

I. *Introduction*—In a subject of such magnitude, as expressed by the title of this paper, it will be possible to present only those principles which appear of first importance in the management of uncomplicated diabetes. In spite of the discovery of the pancreatic extract, insulin, all authorities agree that diet adjustment must remain the basis of diabetic management.

For a long time, diabetes has been generally regarded as the most inadequately treated systemic disease in medicine. This has resulted largely from the failure of some physicians to master a few fundamental principles of dietetics, without which successful treatment is impossible. However, with the introduction of insulin, it has become even more incumbent upon them to plan and control, by exact quantitative methods, the total dietary regime of the patient.

II. *Diet Adjustment*—Diet adjustment implies primarily the preparation of a diet with the proper balance of protein, fat, and carbohydrates, and at the same time with a known food value in calories, which will be sufficient to answer the wear and tear and the energy requirements of the particular individual.

The brilliant contribution of Woodyatt, in 1921, has revolutionized our method of diet adjustment. Woodyatt showed that three-fifths of the protein, one-tenth of the fat, plus the total carbohydrates of any diet, is burned in the organism as glucose. This was a radical deviation from our former ideas as to what composed the available glucose of the diet.

The second fundamental principle he advanced dealt with the relation of the amount of fatty acid in the diet, to the amount of glucose; in other words, he showed that a diet in which the total fatty acid in grams is not more than one and five-tenths times the total available glucose in grams will be found safe and advantageous in most cases. This conception he expressed by the formula: The total fat of the diet should not exceed twice the carbohydrate plus one-half the protein.

With these two fundamental principles in mind, the ratio of the three components, P, F, and C, can be readily determined and the diabetic assured of a safe or balanced diet. From the Aub-Dubois calculations, it can be estimated that an adult with average nutrition will utilize, in twenty-four hours, approximately thirty calories per kilo of body weight. This necessary fuel must be obtained from the P, F, and C in the food, or from the body tissues. One gram of C or P will yield four calories, and one gram of F, nine calories. In the animal economy, a certain amount of P is absolutely essential for growth and to replace nitrogenous waste. This amount is usually estimated to be from .7 to 1.0 gram per kilo of body weight in the adult, and a somewhat higher figure in infancy and childhood. With these figures as a basis for calculation, the proper caloric value of diets in diabetes are readily determined.

III. *Objects of Treatment*—Before proceeding further, it may be well to recall the objects of treatment in diabetes. These can be grouped under three heads:

1. The maintenance of body weight, strength, and efficiency. This I consider the prime object of treatment. Formerly this was difficult to attain by our undernutrition methods, because when the diet was increased above a certain point, the disease showed rapid progression and when it was decreased, the patient lost strength and efficiency.

2. The maintenance of a urine sugar-free and a normal blood sugar-level. This I believe is of extreme importance, and although some authorities are inclined to put less weight on these laboratory data, particularly since the advent of insulin, I feel that all experience with the management of diabetes points to the value of a urine sugar-free and the maintenance of a normal blood-sugar level.

3. The prevention of acidosis. Ketonuria has always been the danger signal in diabetes, and it goes without saying it remains the one thing above all others to prevent. Besides the abnormal metabolism of glucose, diabetes is characterized by a defective metabolism of fat. "Fats burn in the flame of the carbohydrates," and so, with a marked reduction in the burning of carbohydrates, the fat metabolism is upset. Fat is incompletely burned, with the result of an accumulation in the blood and tissues of fatty acids, such as diacetic acid and acetone. These so-called ketone bodies may be derived from the protein as well as the fat, but to a lesser degree; the former yielding in terms of fatty acid a possible 46 per cent by weight, and the latter 90 per cent. The point of all this is, that these ketogenic components of the diet must, therefore, be balanced by the anti-ketogenic glucose, which is produced not only from the carbohydrate food, but also in smaller amounts from the proteins and fats according to the first principle of Woodyatt, referred to above. This is roughly the chemical mechanism of the production of acidosis in diabetes. To discuss the entire subject of acidosis and its management, at this point, would take me too far afield. However, it will be referred to later when dealing with the use of insulin.

IV. *The Use of Insulin*—So much for diet adjustment and the objects of treatment in diabetes.

Insulin is the active principle derived from the Islands of Langerhans of the pancreas. The story of its brilliant discovery by Banting and Best at the University of Toronto needs no repetition here. The commercial product of this substance, now in use, is manufactured by the Eli Lilly Company of Indianapolis, and is called iletin. It is supplied to the profession in small glass vials in two strengths, designated as H-10 and H-20, and can be used effectively only by the subcutaneous and the intravenous routes.

In my work, all patients presenting themselves for treatment are hospitalized for a preliminary

* Read at the Annual Session of the Nevada State Medical Association, September 29, 1923.

study, which requires from four to six weeks. The object of hospitalization is twofold: First, to determine accurately the severity of the case and establish the level of the natural glucose tolerance; and second, to educate the patient in the use of quantitative diets and the use of insulin, if it is found that this is required.

The actual procedure I have found useful for the great majority of uncomplicated cases is somewhat as follows: The first thing to be determined is the patient's natural tolerance for glucose; in other words, the amount of glucose that the individual can burn per twenty-four hours, without the artificial aid of insulin. On admission to the hospital, the patient is weighed and put to bed. The daily twenty-four-hour urine specimens are collected and tested qualitatively for the presence of sugar and ketone bodies, and the quantitative amount of glucose in the urine is also determined. A blood sample is collected each morning before breakfast to determine the fasting blood-sugar level.

The first test diet I use in most instances contains a glucose value of 100 grams, in which the relative amounts of P. F, and C are determined by the Woodyatt formulae, referred to above. For instance, in a sixty kilogram patient, the P content of this diet would be placed at 60 grams (i. e., allowing a gram of P per kilo of body weight, as is necessary for basal requirements); the F equals 130, and the C equals fifty. This diet supplies a caloric value of 1610 calories, which would be slightly under the calculated basal requirement of 1800 calories for a sixty kilogram individual. The patient is then observed on this diet for several days, and if he becomes sugar-free and the blood-sugar shows a tendency to fall to the normal level, the diet temporarily remains unchanged. If this status of conditions persists for a week or ten days, it is apparent that the patient has a natural tolerance of 100 grams of glucose or more. Additions to the diet are then cautiously made. Ten to 15 grams of both F and C are added, the protein remaining unchanged. Sooner or later, as these additions are made and the glucose value of the diet rises, the point is reached at which the urine shows sugar and the blood-sugar tends to rise. Just below this point, we may say, for practical purposes, lies the patient's natural glucose tolerance.

On the other hand, it is frequently found that the urine and blood-sugar level will not become normal on a diet containing 100 grams of glucose. In such cases, the diet is gradually reduced in its glucose value by reductions in the F and C components until the level is reached at which the urine and blood becomes normal. If the glucose tolerance is very low, i. e., anything less than 35 grams, as a rule, nothing is gained by prolonging the undernutrition period, and valuable time is lost in doing so. In such a case, it is apparent that the use of insulin is indicated to make up the difference between the low natural tolerance and a proposed diet which will be adequate for the individual, in order for him to attain the three objects of treatment, namely, to maintain bodily vigor and efficiency; to maintain a normal urine and blood, and to prevent the progression of the disease, with acidosis constantly threatening. The decision to use insulin made, it is necessary to raise the diet at once to a glucose value of 75 to 100 grams. This will protect the patient from the so-called hypoglycemic reaction caused by a subnormal blood-sugar following the administration of insulin. I shall have more to say concerning these reactions and their prevention a little later. The initial dose of insulin should be small, preferably five units, either twice or three times a day, about half an hour before meals. Following the administration of insulin, the same close observation of the urine and blood-sugar level are important. In the course of observation, the urinary sugar usually disappears before the blood-sugar level comes to normal. As the insulin dosage is raised from fifteen units a day to twenty, twenty-five, and so on, eventually the patient becomes sugar-free, and following this the blood-sugar falls slowly to normal. Again the diet is increased by 20 grams in its glucose value. With increased diet an increased insulin dosage is required. When the point is reached at which the diet is adequate and the insulin dosage sufficient to just keep the patient sugar-free and his blood-sugar normal, the balance is struck for the individual under basal conditions. It is necessary now to get the patient out of bed as soon as possible and resume his normal activity. The energy requirements of the ambulant patient are increased from 40 to 50 per cent, so the diet must be raised to meet these needs. It is frequently found that the rest in bed on a low caloric diet, plus the assistance which the insulin offers in relieving the strain on an overworked pancreas, brings about an apparent gain in natural tolerance within a few weeks. With increased tolerance, the insulin dosage must be gradually reduced.

The amount of glucose which one unit of insulin will burn varies with individual cases. In the severe cases with low tolerance it appears to be from 1 to 2 grams, whereas in the milder cases, one unit will take care of 3 to 4 grams of glucose.

The foregoing exposition of the manner of determining the insulin dosage in a particular case is only one of the many methods which can be utilized. It is, however, the method of greatest simplicity and the one I have found most useful in the greatest number of cases.

V. *What Cases Shall Receive Insulin*—In the early days of insulin therapy, I was inclined to feel that only exceptional cases would need insulin. In l oking over my clinical material in the University of California Metabolic Division of the out-patient department, I found numerous cases that had apparently done well for several years on low caloric diets. However, as our experience with insulin has accumulated, it becomes clear that its use will be gradually wider and wider. Probably the largest group of cases that require insulin are those in which small doses daily, say from ten to twenty units, are sufficient. In consideration of this experience, I have now reversed my opinion and believe it is the exceptional case of diabetes that would not be better off with insulin than without it. I do not believe that many diabetics are so mild that they can constantly manage a properly balanced 2000 to 2500 calorie diet without showing urinary sugar,

and if this is true, it would appear that most diabetics need insulin if they hope to lead anything like a normal life and maintain anything like a normal metabolism.

VI. *Overdosage With Insulin—The Hypoglycemic Reaction*—Overdosage with insulin produces a lowering of the blood-sugar to subnormal levels, and is accompanied by a fairly well-defined symptom-complex. The patient notices a general sense of weakness, trembling, drowsiness, and hunger which comes on usually from one to two hours after the administration of the insulin. Slight overdosage may occur at any time during the use of the drug, but it is not attended with serious results. If it recurs frequently, it is direct evidence that the dosage is too high or the diet insufficient.

This hypoglycemic reaction is promptly and readily overcome by the immediate administration of a glass of orange juice containing 10 to 15 grams of glucose or 20 grams of milk chocolate.

Patients who are to receive insulin are always instructed in this method of controlling this condition at the outset of treatment, and to the present time, I have not seen nor read of any serious accidents from overdosage.

VII. *Hospital Instruction and Home Treatment*—During the period of hospitalization, the patient is given systematic instructions in planning quantitative diets, in the use of insulin, with particular reference to dosage and the care and use of the hypodermic syringe, and in the performance of the Benedict's test for the presence of sugar in the urine.

By means of a special diet card the instructions in dietetics are greatly simplified and readily mastered.

The home management of patients, after the preliminary hospitalization, has been entirely satisfactory. The patient examines his urine each day; he plans and follows a carefully prepared dietetic regime of known food value, and he takes his insulin in the proper dosage as was determined for him in the hospital. The cases that I have followed under these conditions have been attended with pleasing and satisfactory results.

Frederick Allen is still of the opinion that slight undernutrition is the ideal state for the diabetic to maintain even with the use of insulin. I am of the same opinion, and accordingly I warn my patients to prevent overweight and adjust their final diets which they are to follow at home, with this in mind.

VIII. *Acidosis*—The problem of acidosis is a big one, and I hesitate to enter into its discussion. Its extreme importance, however, compels me to present briefly the general plan of management of this condition I have adopted since using insulin.

Clinically, acidosis is characterized by drowsiness, deep and rapid breathing, nausea, and often vomiting. The clinical picture is confirmed by certain laboratory findings, such as acetone bodies in the urine and a lowering of the carbon dioxide combining power of the blood plasma. All degrees of acidosis occur depending on the amount of acetone bodies in the blood and tissues; however, its presence in any degree must be regarded as a serious affair.

Impending acidosis requires the withdrawal of all food except the C represented in the juice of citrus fruits. A pint to a quart of orange juice should be given each twenty-four hours. Besides this other fluids should be forced, and between five and ten quarts of water should be taken in this period. Where oral administration of fluids is not possible, saline solution by rectum, or subcutaneously, should be utilized. An enema should be given at the start and repeated daily if necessary. The use of sodium bicarbonate still has a place in this condition. The amount to be used will vary in individual cases between 5 and 50 grams per twenty-four hours, by mouth or rectum.

Finally, the presence of acidosis, in any extent, indicates the prompt use of insulin. As a rule, thirty to forty units of insulin should be given intravenously and twenty to thirty units subcutaneously from the start. A blood sample is taken for the determination of the blood-sugar and the carbon dioxide combining power of the blood plasma. The urine is also followed closely for the presence of sugar and acetone bodies. Subsequent insulin injections should be made every hour or two hours, the dosage depending on the clinical condition of the patient and the laboratory findings. If the blood-sugar remains well above normal and sugar is still coming through in the urine, high dosage of insulin (thirty to forty units) is still required. The subsequent doses of insulin, however, should be accompanied by the administration of glucose, either dilute glucose syrup or orange juice with sugar, so that for each unit of insulin given, one gram of sugar is given. The purpose of the glucose is to safeguard against a severe hypoglycemic reaction as the blood-sugar falls, and further, to combat the acidosis itself. The more sugar given, the more that will be utilized with a fixed amount of insulin. The utilization of glucose is also essential for the combustion of the accumulated acetone bodies and glucose also has a desirable diuretic effect. If the patient can retain nothing by mouth, the glucose can be given in a 5 per cent saline solution by rectum, intravenously or intraperitoneally.

As acidosis decreases, the insulin dosage required is reduced and the intervals between doses lengthened. The food during this preliminary period is solely the C of the orange juice. Following the disappearance of the acidosis, the diet can be gradually increased to include some P, more C, and finally, a small amount of F. Subsequently, the diet and the insulin dosage can be balanced in the usual way.

This, in a general way, represents the method of treatment in acidosis. For patients first seen in deep coma, the above plan is followed except more intensively and with higher insulin dosage.

IX. *Conclusions*—Our experience leaves no doubt that the pancreatic extract, insulin, is a valuable therapeutic agent. This is measured objectively in terms of lowered blood-sugar values, decreased glycosuria, and in the control of ketosis, as well as in the relief of symptoms.

There is a striking variation in the extent of the

response to therapy with insulin in individual cases. This is accounted for in several ways, complicating infections and difference in severity of the diabetes, appear to be the chief factors.

The effects of insulin can be quantitatively measured in a given case by a careful balancing of a measured diet against a measured dose of the drug. One method of obtaining the proper dosage of insulin is presented above, but no hard-and-fast rule of procedure should be followed blindly in all cases. One must study each case intelligently not only to determine the dosage required to enable the patient to ingest enough food to carry out the normal activities of life, but the division of doses and time relationship between meals needs to be worked out in order to avoid annoying and probably harmful periods of hypoglycemia.

We are only in the beginning of our knowledge concerning the therapeutic use of insulin and undoubtedly, as time passes and experience accumulates, much valuable information, which we now lack, will be forthcoming.

(1251 Flood Building.)

Community's Right to Enforce Physical Fitness—If ignorance and quackery on the part of those who undertake to treat my sick fellow-citizen endanger his health, and thus make him less capable, or incapable, of bearing those economic and military burdens that actually or potentially are his, then I as a member of the body politic, in order that his burdens may not be thrust on me, have the right to see that he is not exposed to ignorance or quackery. For I must pay taxes to support and care for my fellow-citizen, when he is disabled by disease, and I, therefore, am entitled to see that he does not recklessly or ignorantly endanger his health. The soundness of this principle is universally conceded in laws prohibiting bad food and impure drugs, unwholesome dwellings, and insanitary working conditions. No one clamors for the right of every citizen to buy bad food for himself and his family, to live in unwholesome quarters, and to work under insanitary conditions. With respect to these matters, the claim that each citizen's health is his own, to do with as he likes, seems to have no place. What basis is there, then, for the claim that he, when sick, has the right to retard, and it may be to prevent, his restoration to health, by employing incompetent practitioners? My interest in the health of my neighbor is not limited, however, by economic considerations. In case of war, riot or insurrection, I, in common with my able-bodied fellow-citizens, may be impressed into service to defend the common welfare, even at the risk of my life, and I am entitled, on that account, to see that my share in the burden and risk of defense is not increased by the fact that a fellow-citizen who should share them with me has unnecessarily incapacitated himself for such duty, either through the employment of dishonest or incompetent practitioners, or otherwise. Finally, I think I may justly claim the right to see that my fellow-citizen does not, through the employment of incompetent practitioners, expose me and my family to infection, or thrust upon the community an epidemic, in the cost of which I, as a taxpayer, may have to share. I, then, and through the Government and for the common weal, have a right to have incompetent practitioners barred, no matter how much my ignorant neighbor may be willing to endure or encourage them.—William C. Woodward, M. D., Federation Bulletin, September, 1923.

DEMONSTRATING THE TUBERCLE BACILLUS*

By ERNST A. VICTORS, M. D., San Francisco

The tubercle bacillus holds a rather unique position in bacteriology in that its identification, based upon morphologic characteristics alone, is usually sufficient for the diagnosis of a tuberculous process. A biologic diagnosis, owing usually to the time factor, is infrequently disregarded and is generally limited in its application to such specimens in which the organism has evaded microscopic detection. In fact, the diagnosis of tuberculosis must be viewed as presumptive, unless corroborated by positive laboratory findings.

This paper ventures no originality in technical procedure, but is rather a summary of the result of several years' experience in selecting published methods, with individual modifications, with a view to advancing laboratory efficiency and to minimize, without sacrifice of precision, the time of investigation. I think it is safe to assume that, with the commonest tuberculous involvements, pulmonary and renal, by the time the individual reaches a condition of ill health for which he consults a physician, the tuberculosis is "open." Tubercle bacilli are present continually or continuously in the exudate or secretion. This belief carries with it the importance of intensive investigation in suspected cases—re-examinations and protracted material collections, and lends comfort to an ultimate negative conclusion.

CONCENTRATION

Homogenization and fluidification of denser material—sputum, pus, feces, and tissues—preceding depositing for smear preparations is now a well-established laboratory procedure. Many methods are in use, each claiming its group of adherents. We have been inclined to discard methods involving the use of ligroin, chloroform and other immiscible fluids of unequal density for bacterial layering as having no advantage over simple liquefaction by weak sodium hydrate or chlorine solutions and reduction of density with distilled water or alcohol and rapid centrifugalization. Liquefaction by autolysis or pressure steam is not practicable.

One present technic of concentration is to add to the entire specimen submitted, generally in the container in which the specimen is received, a sufficient amount of Lorenz solution to render it semi-liquid, so that an average fraction can be obtained. Small specimens, less than 10 to 20 cm., are used entire. Tissue and curettings are first pulped with sand.

A portion of such partially homogenized specimen—about 15 cm.—is transferred to a heavy glass rubber stoppered bottle, 30 by 100 cm., having no neck. Lorenz solution is again added, in sufficient amount to immediately complete homogenization, aided by vigorous hand-shaking. The bottle is then partially filled with distilled water to reduce density, again agitated and a portion transferred to a 15 cm. centrifuge tube and rapidly spun for twenty minutes.

Lorenz solution is a substitute for Uhlenhuth's

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alkali hypochlorite (antiformin) solution and is a simple calcium chloride—sodium carbonate solution without caustic soda. It is simple to prepare, is more active than antiformin, and is equally resisted by the tubercle bacillus.

Fluid specimens—cerebro-spinal fluid and urine—by their volume render simple centrifugalization a tedious process. The frequency with which direct microscopic examinations are negative in these specimens, but from which the pig tests are positive, is at best disquieting to the laboratorian. One can but conclude that sedimentation methods are incomplete or that slide-search has not been thorough. A trace of egg-albumin fixative added to the deposit is an essential guard against loss in slide-washing.

Our method for handling cerebro-spinal fluids, after pipetting off sufficient fluid for cell-counts and after a sufficient time has elapsed for spontaneous fibrin formation, is to collect upon a slide the fibrin web, if formed, with as little disturbance to it as possible. To prevent balling of the web, a portion of the fluid is pipetted off into another clean container, leaving the web with about 3 or 4 cm. of fluid in the original tube. The web is then carefully floated onto a clean slide (a slide can conveniently take 4 cm. of fluid). Now, by carefully pipetting off the fluid from the slide, the web is left stranded undisturbed. All the fluid is now centrifuged under high speed, and the deposit, to which has been added a loop of egg-albumin, is transferred to the web-slide, dried, fixed, and stained.

Urine gravitation with large sedimentation glasses followed by centrifugalization of the dependent portion has not been overly successful with us, nor have we found the addition of coagulants advisable on account of obscuring the field. Although somewhat tedious, the best method at our disposal is an initial centrifugalization in large (50 cm.) tubes with recentrifugalization of the dependent portions in smaller tubes.

STAINING METHODS

The classical Ziehl-Neelsen staining method has stood, with but slight modification, for many years. Cresyl violet, and Much's gram method have not replaced carbol-fuchsin in general application. There is no question, however, judging by comparative methods, but that a great number of tubercle bacilli are non-acid-fast types and yield the dye during the acid-alcohol decolorization process. The introduction of sodium sulphite by Konrich as the decolorization agent, although long known as a destroyer of aniline stains, has more than doubled the number of visible tubercle bacilli in the field. With us, certain sputums that have been negative under the old technic have yielded typical fuchsin-stained rods when treated with this decolorant.

Referring again to the carbol-fuchsin stain, we find that a minimum of twenty minutes immersion is essential to complete staining. A longer period is desirable when practicable. Heating the carbol-fuchsin does not hasten or intensify staining.

Since the introduction of sodium sulphite in decolorizing, numerous modifications of Konrich's technic have been put forth. None, in our opinion, is equal in simplicity and result. The choice of picric acid, malachyte green, Bismark brown, or weak methylene blue, as counter-stain is individual.

One slide only is necessary—but that thoroughly searched. In my laboratory a search of not less than fifteen minutes has been long established as the minimum time before a smear can be negatived.

Demonstrating the organism in situ in tissue is best effected in thin frozen sections, after formalin hardening. Such sections floated onto egg-albumin slides, fixed with absolute alcohol, are stained by the usual Konrich method, picric acid being used as the counter-stain. Dehydration and clearing is carried on in the usual manner, but as quickly as possible.

CULTURAL METHODS

We have never been able to demonstrate tubercle bacilli in the culture tube inoculated with material that has failed us in microscopic smears. Nor can we claim any pronounced success with culture media methods of isolation with material containing a grossly mixed bacterial flora. We have obviated the drying tendency of Petroff media and of William's and Burdick's modification by moist incubation. The latter media has our preference. Lyall-Griffiths beef-liver-egg infusion media appears to yield no advantage.

Destruction and inhibition of secondaries without decreasing the viability of the tubercle bacillus appears to be more theoretic than real. Glycerin treatment as suggested by Twort has been entirely ineffectual, and gentian violet in 1:2500 dilution is likewise of little value. Digestion with weak sodium hydrate followed by washing with normal salt solution, rather than neutralization, has given better results than antiforminized specimens. We have followed Griffith's antiform technic carefully, sowing tubes in 1-2,-2-3 and 5-minute intervals with 15 per cent antiformin treated material without better results than with weak caustic soda.

BIOLOGIC METHODS

Although conceded that susceptible animals offer the most suitable medium for differentiation between pathogenic and non-pathogenic acid-fast organisms, and that this medium is the most delicate for the specific demonstration of tuberculous disease, we cannot deny the fact that our commonest inoculable animal, the Guinea pig, occasionally resists implantation of certain strains of human tubercle bacilli. The diagnostic success of Guinea pig inoculations with material suspected of being tuberculous depends obviously upon animal susceptibility plus the number and virulence of the injected organisms. All three elements of the equation resist arithmetic deduction, owing to individual and unknown variation. Suffice to say that all inoculatory procedures carry with them a certain degree of "negative" uncertainty.

Under the ordinary intraperitoneal injection procedures, the time factor has been an annoying contingency. The four to six weeks interim before conclusions can be reached is not without its embarrassments and has had a deterrent influence upon the general use of so valuable a diagnostic procedure.

Bloch has demonstrated the rapid development of tuberculous adenitis in Guinea pigs after trau-

matizing lymph nodes between the fingers and injecting tuberculous material into the drainage area subcutaneously. Bloch's technic, while not yielding results as diagnostically convincing as does the peritoneal route, nevertheless demonstrates a heightened susceptibility to tuberculosis after disturbance of lymphoid structure.

The lymphocytic defense against the tubercle bacillus is well known; more specific is the wax and fat splitting ferment of Marie and Fleissinger—lympholypase. After massive Roentgen-ray dosage a reduction in the peripheral circulation of both leucocytes and lymphocytes takes place without much alteration in ratio. It is suggested that susceptibility is increased in proportion to the diminution in ferment action similar to the ray influence upon glandular internal secretion.

Morton, in 1916, applying this principle to tuberculosis diagnosis, reported the presence of peritoneal tubercles in eight to ten days in pigs injected with tuberculous urine and which had received an X-ray dose of 50 milliampere-minutes, using a twelve-inch focal distance and an eight and one-half-inch spark gap. Following reports by other investigators have not been so encouraging. The same technic was generally followed, variation being in the time of exposure. Eckford, using cultures, failed to note encouraging results with one exposure, but with repeated exposures with the same dose, found the lesions both intensified and hastened but still lacking in striking differences. Eckford fails to state what milliamperage his tube is drawing, and his dose is, therefore, not computable. Kellert, with Morton's dose, found this procedure as not replaceable of the usual longer method. Weinberg, using cultures, in a series of three methods of dosage, found no marked difference with Morton's dose, and no difference in the time of death after a double dose at seven days' intervals. He concludes that he is unable to hasten tuberculous lesions after X-rays.

We have X-rayed pigs almost invariably since Morton's report, injecting another pig by the usual method for assurance and control. Seventy-five mam. of ray in broken doses, alternate days for three doses, has been our usual technic. Rarely have we found unmistakable tubercles in ten days or less, but we have never failed to diagnose a tuberculosis in from fifteen to eighteen days. We have never noted nodules in rayed pigs that did not appear in the unrayed pigs in the ultimate autopsy.

We have been interested, too, in the results of injection into the more susceptible abdominal area. Oppenheimer obtained positive and uniform results in fourteen days with intrahepatic injections and with injections into the hepato-splenic area. Miller, likewise, reports diagnostic evidence in twelve to sixteen days after intrahepatic injections. Recently, we are injecting suspect-urines into X-rayed pigs, using the hepato-splenic area and withdrawing the needle while injecting, so that a greater contact can be effected. This procedure appears to be thoroughly reliable for a fourteen-day diagnosis.

As with cultural preparation of thick or mixed bacterial specimens, we prefer washing the deposit with normal salt solution after homogenization rather than neutralization. We prefer using the deposit from untreated urine showing no evidence of contamination, although we have lost some pigs by so doing. Sterilization with gentian violet is a safe procedure and is indicated when secondaries are a possible hazard.

SAPROPHYTES

Certain acid-fast saprophytes—the smegma and Timothy grass bacilli, elevated to importance by carelessly taken specimens and faulty dairying practices—do not today warrant the differential concern that they formerly did. While the smegma bacillus is a common skin-recess inhabitant of the unclean, the practitioner has grown to realize the necessity of safeguard, and is generally zealous of avoiding saprophyte confusion. Nor am I inclined to demand irrigation and catheterization, and am willing to rest a conclusion upon a voided urine specimen from a well-washed and clean genital. Timothy grass bacillus, formerly a common milk contamination, is even a lesser contender. It may be present in specimens collected in unwashed containers that have been packed in grass.

In case of doubt the biologic method still remains as the only dependable method of differentiation.

CONCLUSIONS

In conclusion I wish to reiterate my belief that most tuberculous processes, with the exception of deep-seated infections, are "open" by the time a physician is consulted and that tubercle bacilli are present in exudate and secretion; that tubercle bacilli are usually demonstrable by our present methods; that "negative" findings from repeated examinations or preferably from total specimens taken over a period of days are of exclusional value; that "negative" biologic tests are not necessarily conclusive; that a "safe" biologic diagnosis can be made in fourteen days; that the presence of typical fuchsin-fast rods in properly taken specimens is sufficient to warrant the diagnosis of tuberculosis.

(133 Geary Street.)

DISCUSSION

H. A. Thompson, Timken Building, San Diego—I consider Victors' paper a careful resumé of modern laboratory methods, while certain variations in technique will be found in every clinical laboratory. I do not entirely agree with the statement that we have an open tuberculosis with elimination of bacilli in all cases by the time a physician is consulted. I think we may have an infiltrating lesion before we get destruction of tissue and are able to say tubercle bacilli are thrown off in the exudate and secretion.

I believe the concentration methods are very important in cases of large quantity or of thick specimens, while I think the solution used is not of such great importance. I have found very satisfactory incubation at 37 degrees for twenty-four to forty-eight hours and the use of equal parts of 15 per cent NaOH and Labarraque's solution. It has been claimed by some workers the bacilli may be increased by incubation. While I think they may be more readily found, I can hardly see how anyone who has grown cultures of this organism could admit that.

I think the technique given for spinal-fluid examinations deserves especial attention and is very valuable.

I was very enthusiastic about Petroff's media and cultivation methods for a time, but after a consider-

able series of cases I was unable to demonstrate the organism in cultures, where smears with the concentration method were negative. It is necessary to keep the air of the incubator saturated with moisture which favors the growth of moulds, which the alkaline solutions do not entirely eliminate. I found the gentian violet egg media very satisfactory for primary cultures, but on account of the overgrowth of moulds they had to be transplanted often, and even then it was sometimes difficult to get satisfactory cultures.

I consider another point well taken in regard to the danger of other acid-fast organisms, especially the smegma bacillus, the import of which I consider exaggerated. The hay and grass bacilli in the ordinary specimen should not be a factor. Of course, this is in ordinary clinical work.

For absolute proof I believe we all agree the only positive identification lies in biologic methods.

Dr. Victors (closing)—I am in thorough agreement with Thompson, in that there is no special choice in concentration methods. We have simply weighed the time factor without loss of precision.

Concerning biologic proof of the organism, I am wishing to emphasize that, in the negative result, the biologic test is not at all times conclusive.

PRESIDENT'S ADDRESS, NEVADA MEDICAL ASSOCIATION*

By JOHN LaRUE ROBINSON, M. D., Reno, Nevada

We are a unit of a national organization, banded together for the purpose of promoting the science and art of medicine, and the betterment of public health. January 1, 1918, this unit had 75 members. July 1, 1923, we had 115 members. Our State has four county societies—Nye, Elko, Churchill, and Washoe. We have 59 Fellowships in the American Medical Association, and 33 subscribers to the Journal. Every subscriber should be a Fellow, as the cost is the same. It is, however, necessary for the member in the County and State Society to make regular application for Fellowship, and to pay annual dues. Failure to make such application causes several eligibles to be listed as members only.

California always has contributed liberally to our pleasure and enlightenment, and now the CALIFORNIA STATE JOURNAL OF MEDICINE is our official publication. We have become so closely related to California that we must be interested in her activities and medical policies.

Dr. Wilbur stated in his address at San Francisco that:

"Probably the members of the American Medical Association do the largest amount of charitable work of any voluntary organized body in the world. Up to date much of it has been thoughtlessly done as is the giving of doles to street-corner beggars. The whole problem of charitable and semi-charitable work of the medical profession needs intelligent and modern organization from within the profession. In too many instances we have even lost leadership in our own charitable work. Hit-and miss individualistic methods, protected by tradition and prejudice, are not in keeping with our forward leadership in science. The social relationships of medicine are so intimate and imperative that they are bound to multiply and continue. We cannot stop them by calling them Bolshevik or Socialistic or pro-German, but we can guide them if we get away from the brake and begin to steer."

We cannot steer straight as long as individual members will publicly endorse policies in medicine after their own society goes on record as disapproving the same. This practice weakens the profession as a whole, and gives our critics an opportunity to declare that we cannot agree among ourselves. It would appear as though some of our noted specialists have sold their profession for lay popularity. It is not necessary for every physician to agree at all times with his colleague. Honest disagreement is good consultation and should be encouraged, but the consultation should be held at a medical meeting. When members of organized medicine will bring their troubles to the medical association and there abide by the majority, or get out, the sooner the profession will take its place in the world, to the benefit of society.

The recent war has awakened the entire world to the fact that modern medicine is necessary to successful warfare as well as successful civilization, and the professional welfare worker and politician were not slow to recognize this fact. Laymen attended to having lay-medicine endorsed by societies and legislatures, until the busy doctor has lost command of his own business. By natural law and rightful thinking the physician should be the middleman between medicine and the patient. He cannot treat people by mail successfully, or through the press, or delegate his knowledge and skill to another, without seeing the patient. The multiplicity of health propaganda and medical advice being propagated in our own State is a fair example. We are sending out lay medical advisers, paid by the taxpayers' moneys and various contributions made by well-meaning people, and yet we haven't an institution in the State, of which I am aware, where service can be rendered to the ones who need it most. These lay medical advisers have the temerity to advise patients and their children in reference to medical treatment in the most critical periods of their lives.

The doctor always has, and always will care for the sick—rich, poor, and wage-earner; but the time has come when he cannot do it efficiently without sick-beds, surrounded by the proper services and apparatus to allow him to do his best work. Every community needs hospital beds open to the wage-earner who cannot afford the ruling private hospital expenses, and it is up to the people to provide these beds, either through taxation or endowment, and the patients using the beds must not be branded as belonging to any one class, either by the amount of money paid or the type of disease they are suffering from. When the physician directs the patient to the hospital he assumes the responsibility of a careful physical examination, good surgery, and care. How can he do this without having something to say concerning the equipment, management, and policy of the institution? It is the duty of the physician to render whatever service he can to every hospital he can, providing the hospital

* Presented at the Twentieth Annual Session of the Nevada State Medical Association, Reno, September 28, 1923.

is legitimate. This is an economic proposition as well as a humane one, for there can be no social progress without good public health, and when one is left inefficient from lack of proper medical attention, it is charged to the taxpayer, plus the individual misery.

To quote from the American College of Surgeons Bulletin:

"For the past decade, American hospitals have been passing through a state of change. The development of modern surgery and medicine, the advancement in diagnostic procedure, the forward strides of pathology and roentgenology, made severe and confusing demands upon hospitals. In addition medical men, hospital executives, and public health officials began to conceive of the hospital in a new light—that of an institution which makes itself not only the clearing house for treatment, but also the headquarters for community health activities. Some such conception came to the minds of medical men and hospital executives, who were striving to give their communities the best in modern medicine. And this widening of responsibility was altogether natural. Hospitals, founded on a basis of service, had as their dominant motive the inherent desire to improve this service and to extend it to the entire community."

My plea is for the doctor to study this most important social question more thoroughly, to assist the public in realizing that it requires education and hospital equipment to serve from the public health standpoint.

As Dr. Edwards, president of the California Medical Association, stated in his address:

"I am pleading for a closer relationship between physicians and the public and between physicians and eath other, both in and outside of the medical society meetings. This is necessary if we expect to meet the influences that are directed against scientific medicine and surgery."

A medical society usually succeeds or fails, in proportion to the faithfulness, sincerity, and activity of its secretary; therefore, I want to thank our secretary, both individually and on behalf of the association, for the indefatigable service he has so cheerfully rendered us.

We are the smallest State in the union in population; therefore, it ought to be easier for us to understand each other and to educate the public in regard to medical subjects than our sister States.

Who Shall Teach and What Shall Be Taught—Since there is nothing which is so vital to public interest as community and personal health, it follows that there is nothing which should be more widely advertised nor more freely talked about. The public has seized psychology by the tail and is excitedly swinging that and the various gland theories and truth serums and such sensational aspects of science as creep out under the tightly closed door of the laboratory; and the swinging and flinging broadcast of the absurd deductions, uncorrected and unreproved, are doing not only harm to the profession we uphold, but, which is much more important, to the public of whose safety we are the custodians. —(Henry P. Newman, Bulletin San Diego County Medical Society, July 20, 1923.)

VIS MEDICATRIX NATURAE*

By W. F. McNUTT, Sr., M. D., San Francisco

First, let me say, I hold no brief for any of the numerous cults such as mind cures, faith healers, Christian Scientists, immanuel movements, Coueism, chiropractors, neuropaths, etc. I advocate no special system of therapeutics. I have practiced medicine for over fifty years, using any and every remedial legal means to cure or relieve the patient, as is every physician's duty. Every successful physician must learn when to depend on vis medicatrix naturae, with a placebo, and when a careful examination is necessary, to diagnose and treat the patient.

He will not learn this from text-books or didactic or clinical teachers, for the reason it is not taught. The physician is left to learn this branch of his professional career by experience or intuition. Some forty years ago Sir William Gull was the most prominent consultant in London. Many men, and especially women, paid him their two guineas for his famous placebo. He had learned when a placebo was required or when a careful examination was necessary. He had learned when to rely on vis medicatrix naturae, or when medicine or surgery was necessary. No man had a greater contempt for quacks.

I am rejoiced at the stand our two universities have taken in regard to medical education. In the future those who receive a diploma from either of these medical schools will be men and women of education and be in the category of the learned professions.

There is a science in the study of medicine and an art in the practice. The practice of medicine is not and never can be a science. Every physician knows that most of our remedies are given empirically; there are few specifics. The successful physician must have a knowledge of human nature, must understand the temperament and prejudices of his patient. He will often be obliged to compromise with his patients on non-essentials and be firm in matters that make for the patient's welfare. The physician must keep in mind vis medicatrix naturae and that many patients will make a good, quick, and permanent recovery when given a placebo, with assurance that it will make them well. In dealing with organic or so-called functional diseases, he must not forget his patient is a living, thinking, reasonable or frequently an unreasonable human being, not an inanimate object. I hope every physician will be impressed with Shakespeare's wisdom when he makes Hamlet say, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." Hippocrates said, "Nature is the physician of disease. Charron, a French physician, who probably wrote the greatest and best book on vis medicatrix naturae, says: "The most that a doctor can do is to assist the body in making use of this power, which is nothing more than the action of the unconscious mind." Brice, in the London Practitioner, says: "We are compelled to acknowledge a power of natural recovery inherent in the body." Herbert Spencer

* Read before the Committee on Medicine, San Francisco County Medical Society, October 2, 1923.

says: "It is working out in the body of a law which obtains throughout all nature."

In the twenty-first edition of Dunglison's dictionary, vis medicatrix naturae is defined, "Instinctive healing power in an animal or vegetable, by virtue of which it can repair injuries inflicted upon it, or remove disease." Gould, third edition, "The healing power of nature apart from medical treatment."

The teachers of medicine evidently think they have done their duty to medical students by teaching them the science of medicine. And yet they are supposed to prepare students to practice medicine. They teach the use of all the apparatus that make for the scientific diagnosis and treatment of disease. They do not teach psychotherapy; they do not even mention vis medicatrix naturae. This important branch of every physician's routine practice is left for the physician to learn by experience. Some 500 years ago Ambrosé, the distinguished French surgeon, wrote on the wall of the ecole de medicene, "Je le pansay et Dieu le guarit" (I dressed the wound, God healed it). The advanced modern surgeon would say, "I dressed the wound (antiseptically), that mysterious (power) vis medicatrix naturae healed it."

The physician who depends entirely upon science for the diagnosis and treatment of his patient must often fail to relieve or cure the complaint of which the patient suffers or thinks he suffers. In very many cases the patient needs a placebo, given with the assurance that he will soon be well. As a rule, patients care nothing for an elaborate, expensive and scientific examination; they want to be cured. Playfair, in the British Medical Journal, says, "The tendency of advanced medicine of the present day is, unfortunately, to overlook cure in the zeal for accurate diagnosis and correct pathology. In short, it is science rather than therapeutics that is the aim." I have already stated that therapeutics, the treatment of disease, is not a science and never can be. "Coming events cast their shadows before." The time will soon be when teachers in our medical schools will teach psychotherapy. This important branch of the practice of medicine, will not be left to the cults. The facts are, if vis medicatrix naturae had been taught and appreciated by the profession there would be fewer cults today.

There are only a few left over, as it were, who do not believe that nature ever cured anyone, who do not believe in vis medicatrix naturae, nor do they recognize the conscious or unconscious mind or the influence of the mind on the body. With a scientific education, well-grounded in the foundation of the science and practice of medicine including psychotherapy, the future physician will not leave an important branch of practice to cults and ignorant quacks. Who is to blame for this disgraceful condition? When medical schools wake up to the fact and teach that vis medicatrix naturae occupies a large part of every physician's daily practice, their graduates will be of much more service to the people and there will be a change in present conditions, but not until then.

SOME PHASES OF GONORRHEAL COMPLICATIONS AND THEIR PREVENTION BY ATTENTION TO CERTAIN POINTS IN THE TREATMENT OF ACUTE GONORRHEA*

By JAMES STEINBERG, M. D., Los Angeles

One of the most interesting cases of multiple complications arising from an original Neisserian infection of the anterior urethra, came into my service at the Kaspar Cohn Hospital in Los Angeles about one and a half years ago, showing the extensive complications that may occur in a single instance, following an apparently simple acute anterior gonorrheal urethritis. The case should serve as a warning against the consideration of this infection in too light a manner.

The cystoscopic findings, in conjunction with the X-ray and bacteriological examinations should prove instructive as well as interesting in showing their inestimable value in the complete ultimate analysis of these cases. The case I wish to cite is as follows:

Mr. H. S., 31 years old, an iron worker by occupation. He was admitted to the hospital, running a temperature of 103 degrees, unable to void through the anterior urinary canal, complaining of continuous pain over the bladder and scrotal regions. He gave a history of previous Neisserian infection as follows: First infection of gonorrhea ten years previously, lasting six weeks, followed by a second infection six years later, lasting two months. This second infection was complicated by stricture of the urethra. A third infection of gonorrhea was acquired two years later, lasting five weeks. Syphilis was denied. He was operated upon for a right inguinal hernia seven years before. For the past two years the patient has noticed that his stream has been gradually becoming smaller and his urine more difficult to pass. Two months ago the scrotum began to swell, gradually increasing in size. This was accompanied by great pain, chills, and fever. Two weeks later the scrotum ruptured, discharging urine and pus. After that the patient passed most of his urine through the sinus in the scrotum.

Preliminary objective examination revealed the scrotum to be a large gangrenous mass, about the size of a good-sized grape fruit, very foul-smelling, inflamed, and discharging dark, thick, yellowish-brown pus and urine. The urethra revealed an impassable stricture at the bulbo-membranous junction. A smear of the pus from the discharging sinus in the scrotum revealed the staphylococcus, and colon bacilli, but negative for tubercle bacillus and gonococcus.

I performed a preliminary operation on March 5, 1921, to reduce the inflammatory mass. The scrotum was laid wide open and all the gangrenous tissue removed. A sinus was disclosed in the inflammatory scrotal mass, through which the patient passed his urine. The scrotum was sewed up and a drain left in the wound. Within twenty-four hours the temperature began to subside, and the patient was quite comfortable.

* Presented to the Section on Urology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

A few days later I passed a filliform bougie through the stricture at the bulbo-membranous junction, with the aid of the Buerger universal operating urethrascope, attached a urethratome, and performed an internal urethrotomy. A permanent rubber catheter was inserted through the anterior meatus into the bladder, because of excessive hemorrhage, and left in place for two days, after which time it was removed. Following this procedure, the patient voided a good-sized stream. Daily irrigations of the bladder were then instituted and the urethra kept open by subsequent dilation. The bladder urine at this time was cloudy and full of pus. A smear of the secretion expressed from the prostate showed many pus-cells.

The patient began to improve under general and local treatment with massage of the prostate, bladder irrigations and irrigation of the wound, which healed very rapidly. The urine had now stopped coming through the scrotal sinus.

At the end of several weeks, the patient was cystoscoped, with the result that the examination disclosed a cystitis and a moderate double pyelonephritis with both kidneys showing, however, very little impairment of function, and no obstruction in either ureter. X-ray examination revealed no calculi nor any other abnormalities in the upper urinary tract. Bacteriological examination revealed the pyelonephritis to be due to the colon bacillus. Both kidney pelves were irrigated with boric acid solution, followed by injection of the pelves and ureters with a 1-500 solution of silver nitrate. This process was repeated ten times at intervals of six to seven days, until the specimens from both kidneys were clear of pus. The strength of solution of silver nitrate was gradually increased with each succeeding treatment until 1 per cent was reached. The bladder irrigations were continued daily during this time, as were also the urethral dilatations with the posterior Kollman dilator, together with prostate massage at less frequent intervals, until, at the present time, the patient has been freed of infection, and is passing a good-sized stream. He is now being treated only to keep the urethra wide open and prevent any possible contraction at the site of the old stricture.

The case herein cited will serve to bring to your attention the importance of proper and thorough treatment of early gonorrhea, that such a succession of unfortunate complications as occurred in the above case may be avoided. In a large majority of cases it lies within the power of the physician treating the case to take the proper precautions in order to prevent such serious and extensive involvement. The fact should not be lost sight of that every case of acute gonorrheal anterior urethritis is a potent factor in the possible production of dangerous complications resulting, in some instances, in very grave and permanent danger to the urogenital tract.

There are a number of important factors to be considered in the early treatment of acute gonorrhea, such as proper diet, rest, and an abundance of fluids to keep the anterior urethra constantly washed and drained out from above. The position of the penis should be considered very carefully when fitting a suspensory. This should be worn so that it does not constrict or bind the urethra, nor should it elevate the glans so that it is brought up toward the abdominal wall. In this position the pus, instead of running out of the meatus, will go the other way and increase the possibility of posterior involvement. No local injections should be used for the first few days of the acute infection. The silver salts are particularly contra-indicated during this time, as they aggravate the inflammation and increase the pus.

The treatment should commence by the administration of internal medication, a proper amount of rest with restraint from physical exertion, and a bland diet with elimination of spices, condiments, acids, red meats, alcohol, and any other articles of food which might irritate the urinary tract, in conjunction with an abundance of fluids to relieve the acute symptoms. The formula which I have found to produce the quickest relief and most satisfactory results in reducing the discharge and allaying the stinging and burning of the acute urethral inflammation, consists of a combination of codeine 1/6 grain, tincture of belladonna 10 gtts., urotropin 5 grains, and palmathol as a vehicle to 1 drachm. This is administered in 1 drachm doses in a glass of water every three hours.

In allowing the patient to handle his own local medication, he should be carefully instructed in the proper method of procedure in the technique of injection of the anterior urethra. Particular stress should be laid, and the patient cautioned, to correctly follow religiously every single detail. Therein lies the secret of success or failure. He should be taught how to sterilize both the syringe and the penis, and especially cautioned to inject the solution slowly and smoothly, and not to overdistend the anterior urethra.

Careful attention should be given to the strength of solution and method of injecting the anterior urethra with the silver salts. Strong solutions should never be used. I believe that more complications are brought about by faulty manipulation of local injections than any other one thing.

The patient is given 2 ounces of a 5 per cent solution of freshly prepared argyrol and a bulb urethral syringe. It is unwise to provide the patient with more than one week's supply of any organic silver salt, for at the end of that time the solution has commenced to deteriorate. The bulb syringe is much safer to prescribe than the piston syringe. It is cleaner, easier to handle, and the solution can be injected much more smoothly and without jerking. This is almost impossible with the average piston syringe.

The patient is instructed to boil the syringe, draw up 1 drachm of solution, and set the syringe aside. He then voids and thoroughly washes the penis with soap and water. The next step is to grasp the penis just behind the corona with the middle and ring fingers of the left hand, holding the lips of the meatus apart with the thumb and fore-finger. Holding the syringe parallel with the body of the penis, and firmly fixing the blunt-nosed tip of the syringe against the meatus, he injects the solution very slowly. It is allowed to remain

in the anterior urethra from three to four minutes, by closing the meatus with the thumb and forefinger of the left hand. The patient should be cautioned not to compress the urethra behind the meatus to try and keep the solution from entering the posterior urethra, as serious consequences might ensue. At the end of from three to four minutes, or sooner if it burns, the solution is allowed to flow out. The patient should not void immediately after. The penis is then placed in a gauze bag, with a small piece of cotton at the bottom. The patient is cautioned to have the bag large enough so that the meatus does not touch the cotton, as the pus will stick to the meatus and thus keep reinfecting the urethra.

This method of injection is carried on for a varying period of from five to seven days, three to four times a day until the acute inflammation has subsided. The patient should always void before going to bed, for if the argyrol is left in the urethra over night, it will irritate and increase the discharge. At the end of this period, the argyrol solution is replaced by a ½ per cent solution of protargol for three to four days, and then increased to 1 per cent.

During the course of the treatment, the patient is seen every other day, the urine tested, a smear taken, and all the points in the technique of injection checked up.

If the discharge does not entirely clear up with this treatment after two to three weeks, and there are no gonococci present, an astringent injection may be used twice a day in the form of zinc sulphate, 4 grains, and liquor plumbi subacetatis, 3 ounces.

The argyrol is used at first because it is less irritating than protargol in the very acute inflammatory stage. After this, however, it becomes ineffective and must be supplanted by protargol.

The injection method of treatment, as above described, is continued for from twelve to fifteen days, at the end of which time the average uncomplicated anterior urethritis will have subsided. There will be no discharge, and the urine should be clear. The final test should then be taken by gently milking out the glands in the anterior urethra, and another specimen examined by massaging the prostate. If no pus or gonococci can be found, the patient is cured. In any case where there might be a doubt as to the question of a cure, cultures should be made from both the urethra and the prostate, and then the specimens examined.

Prostate massage is absolutely contra-indicated during the course of an uncomplicated anterior urethritis, as it will tend to produce a posterior infection. Vaccine therapy is also contra-indicated, as it is in any other active acute inflammatory process.

Thus we may see that the treatment of every case of the anterior urethra is a very serious matter, and should be so considered. The treatment should be conducted with all due regard and proper precaution toward the prevention of extension of the inflammatory process by paying particular attention to every detail in management and properly guiding the patient in all the various points of technique.

When complications have already been acquired, and especially in long-standing cases, as illustrated in the above example, where it was reasonable to suppose that the patient had acquired extensive involvement of the genito-urinary tract, it is absolutely essential to study each separate complication in detail. This is imperative, particularly in long-standing cases of bladder infection which do not clear up under treatment. In every such case, the patient should be cystoscoped and the ureters catheterized to determine the presence or absence of pyelitis, and the presence or absence of obstructions in the ureters, which might prevent the proper drainage from the kidney pelves. X-ray examination should be conducted as a routine to determine the presence or absence of calculus, the size and position of the kidneys and any abnormalities in the kidneys or ureters. Bacteriological examination will determine the type of infection. The kidney pelves, if infected, must be properly treated until the infection has been completely eliminated from them, as demonstrated in the above case. This must necessarily be accomplished before a cure can be expected.

In addition to daily bladder irrigations and treatment of the urethral stricture as indicated in the above case, together with massage of the prostate every four to five days when there is an accompanying chronically infected prostate, as soon as the patient has been cystoscoped, the ureters catheterized and a pyelitis has been established, lavage of the kidney pelves should be instituted. The patient should be cystoscoped, the ureters catheterized, and the kidney pelves irrigated with boric acid solution followed by injection of a 1 to 500 solution of silver nitrate every five to seven days. This is continued, gradually increasing the strength of solution of silver nitrate by one-tenth of 1 per cent gradations to 1 or 1½ per cent until the specimens from both kidneys are clear and the pus has entirely disappeared.

The instructive points of value to be learned from this case are:

1. The importance of prophylactic management, and the necessity of extreme care in properly carrying out each detail in the technique of treatment of a case of acute gonorrheal anterior urethritis, in order to prevent complications.

2. The necessity of exhaustive study of complicated cases to determine the extent of involvement of the infective process with a view toward eliminating infection of the upper urinary tract.

3. The inestimable value of cystoscopy, together with catheterization of the ureters, X-ray, and bacteriological examination in these complicated cases to determine the full extent and type of the infection, the presence or absence of obstruction in the ureters, or any other condition which might be of pathological importance.

(509 Junior Orpheum Building.)

DISCUSSION

Guy Manson, Mattei Building, Fresno—That an acute gonorrheal urethritis is not a trivial affair has long been recognized by the medical profession. But to get the layman to realize this is often a very difficult matter. There is always some well-meaning friend on hand who has cured himself in a week's time with some patent medicine and is ready

to give your patient all the advice he needs. This often prevents the close co-operation necessary in handling these cases. Until we can find some way to compel the drug clerk to keep his hands off these cases, this will always be the case.

There is no difference of opinion regarding proper diet, rest, and abundance of fluid, but whether to begin at once with local treatments or not is, I believe, still a disputed question. Personally I do not believe that a weak solution of argyrol, 5 per cent or less, if carefully injected, does any harm. It allays the patient's anxiety and makes him believe everything is being done for his speedy recovery.

I think we oftentimes do not lay enough stress on the kind of syringe and the manner of giving the injection. I like to give the first injection myself, and I like to furnish the syringe myself; for I find I cannot trust the druggist to furnish the proper syringe, no matter how carefully we may specify what we want.

A properly fitting suspensory and drainage-bag is another important detail often neglected entirely by the attending physician. How often do we have patients referred to us who present themselves with a piece of cotton packed tightly under the foreskin, but who have never received any instructions at all on the matter of drainage.

I am glad to see there are some urologists who still have faith in argyrol and protargol. I have not had the success with some of the newer preparations that some have claimed, and their staining properties are most distasteful to the patient.

I thoroughly agree with the author in the necessity for thorough study, including cystoscopy, of every long standing case of bladder infection that does not clear up under treatment. These cases nearly always have an underlying kidney involvement.

In regard to pronouncing the patient cured, I doubt if a patient can be pronounced cured by simply examining specimens obtained by milking out the glands of the anterior urethra and massaging the prostate. Especially is this true if the patient is contemplating marriage. We have all seen patients who have been pronounced cured by competent men who have afterwards infected their wives, although they have had no new infection. I believe we should, whenever possible, prevent our patients from marrying for at least one year after the disappearance of all symptoms, regardless of our laboratory findings.

E. Spence DePuy, Dalziel Building, Oakland—To prevent the acute case of specific urethritis from becoming chronic, to avoid if possible the occurrence of complications, the incidence of which is high even with the best of care, and to properly manage these complications when they do occur, are serious problems.

It is pretty generally accepted at the present time that among the important therapeutic measures, rest and the copious ingestion of water are really important. Of these two it is fairly easy to get the patient to take sufficient water, but the necessary rest, for one social reason or another, is more difficult, with the result that complications are more common than they would be if so simple a measure could be enforced.

It is, of course, essential that the discharge be frequently examined for the gonococcus, for its presence or absence determines the treatment. Nonobservance of this rule and the use of astringent injections is frequently responsible for prolongation of the case into the chronic class, resultant infiltration and urethral damage, and not uncommonly complications beyond the external sphincter. Among the complications not so frequently recognized as it should be is acute seminal vesiculitis. This is a condition which, if recognized at a sufficiently early period, yields readily to proper treatment; but treatment delayed becomes difficult of cure. I feel that vas puncture and instillation of collargol into the vesicles should be done. The number of cases which have been treated in this manner, under the proper indications, is now sufficiently large that the procedure is no longer experimental and should be kept more prominently in mind.

Dr. Steinberg (closing)—Regarding the allaying of the patient's anxiety at the commencement of treatment, it might be said that if the general plan and details of management are explained at the outset, the patient will have enough to do to occupy his entire attention without the immediate administration of a local injection of a silver salt. The internal medication of codein and belladonna, as above described, in addition to the other details of early treatment, will so decrease the local urethral inflammation and diminish the discharge that the patient will then enter upon his active period of local medication with more encouragement and enthusiasm.

As to the question of the pronouncement of a final cure in these cases, it is conceded that the term "cure" is indicative of a clinical cure, after which no further active treatment is required. The case should be watched, however, and seen at periodic intervals for some months after for any sign of recurrence.

If the posterior urethra and prostate have been involved in a chronic case of infection, even though no evidence of infection can be demonstrated with repeated tests for years after, it is a question as to how nearly normal and pale pink-looking the mucous membrane of the posterior urethra ever becomes. In most of these cases that I have passed a cysto-urethroscope, the mucous membrane of the posterior urethra has appeared reddened and inflamed.

The results of improper manipulation of acute urethral inflammations are so far-reaching in character that it is imperative to make an accurate diagnosis before commencing any treatment, in order to establish, not only the extent of involvement, but also the exciting cause of the inflammatory process. A diagnosis should never be made from a cursory microscopical examination of the physical evidence of the urethral inflammation. A microscopical examination of a smear from the urethral discharge is absolutely essential at the outset in every single case.

Many cases of urethral discharge that have been treated for gonorrhea and aggravated by the administration of local anti-gonorrheal injections, have come to my attention. Microscopical examination of the urethral discharge in these cases revealed an absence of the gonococcus, and following the removal of the local injection that had been used, the discharge disappeared at once. More extensive examination in these cases usually reveals an infection in the posterior urethra and prostate of a non-specific origin which requires particular attention to those parts, and not the handling of such a case by the peremptory administration of an anterior urethral injection without further study of the case, including microscopical examination of the urethral discharge.

Causes of Indigestion—Normally the digestive powers are equal to the work demanded of them—that is, the digestion of the food. The equilibrium of the digestion may be disturbed by a decrease in the powers of digestion or by an increase in the work to be done in digestion. The decrease in the powers of digestion may be due to overfatigue, either physical or mental, to disease outside of the digestive tract, and to disease of the digestive tract. The increase in the work to be done in digestion may be due to improper methods of eating, to too much food otherwise proper, or to improper food.—(John Lovett Morse, Journal Iowa State Medical Society, October, 1923.)

HEALTH SUPERVISION IN SCHOOLS *

By EDNA L. BARNEY, M. D., San Francisco

To serve the child is to serve all who come hereafter. That child is best served whose emotions, intellect, and health habits are best trained. It is most fitting that the emotions be trained in the home, the intellect in the school, and health in both. From these advantages must follow a better ability and a more righteous courage to meet life's problems.

Unless scientific knowledge concerning health can have a very practical interpretation for general use, and especially for those associated with the care of children, this knowledge will remain far from rendering its full service.

Health supervision in schools means, in part, health instruction to parents. It does not suffice merely to send parents the reports of physical examinations. It is necessary to cultivate their disposition for receiving health truths with gladness and with understanding. In accomplishing this important part of the work, the greatest aid to the school physician is the patience and perseverance of the school nurse. Success greatly depends on her persistent effort and her consciousness of responsibility.

Many parents have a confused notion that health supervision in the school means the treatment of sick children, and they are, therefore, apprehensive that parents' rights will be invaded; but as a matter of fact, health supervision in schools does not imply treatment of sick children, except with first aid measures in case of accident or sudden illness, or isolating the child with a contagious disease for the protection of others.

Health supervision in schools implies examining children in order to notify parents of correctable defects, as for instance, faulty vision, dangerously large or diseased tonsils, defective hearing, heart or lung conditions, adenoids, carious teeth, malnutrition, faulty posture, and any impending illness. The parents are promptly notified in order that the child may receive that early attention which forestalls the dire results of neglect.

In former times when people entered a drug store and were confronted by long rows of glass-stoppered bottles, gilt and Latin labeled, they felt a reassurance of health. The fear of sickness was thus subdued, but not the cause of sickness. Little was known of the real cause of disease; comparatively little was known about its prevention; so people did their best while faulty living habits and infection did their worst. Health supervision in schools and a well-organized department of public health had not yet arrived.

Health supervision in schools aims to disseminate the simpler truths of science, both for the direct protection of children and that children themselves may more easily grasp the art of living. Nothing is more worthy of our concerted efforts than ways and means to make children more secure against ill-health. With this design, the school is becoming a sort of broadcasting station for health ideas.

To introduce health ideas into a home is easy, but to have them consistently applied is often difficult. This difficulty results, to a considerable extent, from parents trying to direct the child too much by words and too little by example. At the breakfast table the father, in a very deliberate manner, explains to his young son the evil effects of coffee, and in an equally deliberate manner pours for himself a second cup. At the evening fireside, while the mother tries to persuade her little boy never to use tobacco, pa is quietly blowing cigar smoke against his evening paper. We can be reasonably sure that in the back of that boy's head there are thoughts of a little research work—his technical requirements will be a cup of coffee and one of dad's cigars. It is highly probable that the results will be eventually about the same as they were in the preceding generation under similar circumstances, all of which goes to show the general trend of unaided health supervision in the home.

Let us for a moment consider a wonderful factor of control in developing the habits of the child. We can say that child life is to a very large extent made up of mysterious, self-impelling influences strangely acting independently of consciousness or volition. These self-impelling influences we call reflexes. There is one reflex which is marvelously dominant in early childhood—this is the reflex of imitating. By this reflex the child is impelled to do what he sees others do, and especially what he sees his parents do. It is this strange, guileless mimicry in early childhood that keeps the home supreme in swaying the reflexes which are the forerunners of lasting emotions, those emotions which so largely determine for better or for worse the final attitude toward life. Bringing these deep impelling early reflexes and the latter emotions under the reign of will-power is the story of education. Let us repeat that this early reflex of imitating is a most subtle and determining influence, therefore it is highly important that this reflex be rightly directed to health habits.

We can not measure the school influence on health without knowing the home influence. The school is the foreground, the home is the background of this health work. We strive for better health guardianship by the parents and better health habits in the child. Health guardianship by the parents means not only securing remedial measures in sickness, but in a far greater sense the preventive measures against sickness. Above all, parents must be impressed with the salient truth that the big things in health are the little things done at the right time.

Some parents have the idea that when medical attention is available in case of illness, it obviates the necessity of health consideration before illness. They see the importance of guarding the child during sickness, but they do not see the importance of guarding the child during health. This is the old idea of cure versus prevention. In other words, no need to worry about sickness, for when the child is really sick, call the doctor. This abiding trust in medical aid is largely engendered by a false assurance in that magic word "cure." Though medical art has long been dedicated to "curing" people, today medical science centers its action on

*Read at the California Conference of Social Work, Yosemite Valley, May 23, 1923.

preventing sickness. People in general are unaware of the tendency to permanent bad results following sickness in spite of all treatment, even in those cases where recovery at first seems complete. Scientific thought is being more than ever directed to the end results of various diseases in relation to the permanent impairment of future health. Parents should be better informed concerning the too often vain hope of cure and be made more clearly to understand the importance of preventing the primary disease.

It is hard to realize that millions of happy children are endangered by the lurking treachery of diphtheria, scarlet fever, tuberculosis, smallpox, and poliomyelitis. These diseases annually have not only taken the lives of thousands, but have caused other thousands to continue on with one or several of the following conditions: heart permanently damaged, kidneys injured irreparably, eyesight or hearing impaired or lost, mentality blurred, bodies and limbs paralyzed and deformed in varying degrees. From these results we realize how often the term "cure" signifies merely that the child has escaped death to continue on partially, sometimes wholly disabled, and the abiding trust in "cure" becomes the meager solace of forlorn hope.

Only those parents may expect to have their rights invaded who assume the right to neglect the child. Parents' rights with children become better understood when the rights of children are better understood. In olden times a parent had the right to sell his children; later on he had the right to rent his children as bond-servants, the right to keep them at labor, the right to maltreat them by way of punishment, and the right to keep them from school. One by one these ancient rights of parents have fallen, and one by one the rights of children have appeared; and whatever the parents' rights have been or the child's rights have not been, it is at this time and in this country agreed that children shall have the right both to health and to education. So we see that rights are not inherent; they are the products of civilization, the outcome of bitter experiences of mankind through the ages. And in the twentieth century the rights of parents are balanced by what society determines to be the rights of children.

Even within the medical profession there are some, relatively a few no doubt, who feel that their rights are being invaded by health supervision in schools. They likewise must be reminded that they have no inherent rights over children. In a problem so vital to humanity as community health, vocation must subserve and not override that fine humanism—the greatest good to the greatest number. The medical profession is justly proud of a large contribution to social betterment and assumes leadership in ways necessary to make more secure the health of childhood. As yet preventive measures have not reached their highest possibilities; much sickness remains to invoke both the art and the science of the physician.

Besides the occasional word of opposition from a parent or a physician, we sometimes hear a dissenting voice in the teaching profession. Some teachers show impatience at having the routine of their work interrupted. They seem to forget that the worst interruption to well-ordered work is sickness, and that the greatest routine to strive for with children is the routine of health. Although the apathy of a few teachers may sometimes lessen the smoothness of our work, it is gratifying to know that almost all the teachers are now cooperating with the school nurses and other members of the public health department.

We may also mention the need of wider support from serious-minded writers, and of not leaving the propaganda of health so much at the mercy of those who specialize in literary condiments for magazines, who, sacrilegious in science, try with jingling paradoxes to drown a sound thought in the sound of words, and with the discords of fallacy would stop the echo of truth; or those who qualify themselves with a vegetarian diet to pose as health wizards. But the world loves a laugh, and we soon forgive all who have been intentionally or otherwise the funmakers; for in fact their sense of humanity, and especially their underlying sympathy towards the welfare of children, have been too often noted to consider them other than gentle foes. With a goodly reassurance we read, in an essay on health matters by Mr. George Bernard Shaw, this parting advice to children: "Be careful to go to a school where there is what they call a school clinic, where your nutrition and teeth and eyesight and other matters of importance to you will be attended to."

The need of health work is strongly set forth by a few statistics. Of the 22,000,000 school children in America, six and one-half million are so much below consistent weight that they must be classed as malnourished; 1,000,000 need to be treated for diseased tonsils and adenoids; 4,000,000 have visual defects; 15,000,000 need dental treatment; and it is not known how many million are suffering from skin diseases and parasites.

In a recent survey of industry by the Hoover Commission it was found that one billion dollars could be saved annually to industry by reasonable health education and supervision. If this stupendous saving could be accomplished by guarding the health of adults, how much more could be saved in terms of health by beginning health education and supervision in childhood! Work looms large for public health service.

We see the increasing amount of organized health work being conducted by women, but as yet there are only 3500 school nurses in the United States to supervise the health of 22,000,000 children. This means that a vast number of school children are without health supervision, and in those cities employing school nurses there is not infrequently an apportionment of from three to four thousand children to each nurse, which of course shows merely the beginning stage of the work.

It is a most promising fact that educated women are entering the nursing profession. Nursing has become a profession. The education and training of the public health nurse qualifies her to give as well as to receive directions; she is a health educator not only of children, but of mothers, and so

has the best opportunity to aid in general health education; she is the envoy with health tidings to the home. The public health nurse is doing a new and great work.

Few of us realize the large percentage of foreign element in our schools and how much the school nurse in her contact with the home can help to guide these children into becoming little Americans. Over half the children in the public schools of the cities of the United States are either foreign born or have foreign-born parents—57.8 per cent to be more exact. In some cities it is as high as 74.1 per cent. In San Francisco some of the individual schools reach 90 per cent. It is often the school nurse who introduces our American sanitary and health customs to the immigrant. Not all immigrants are uncleanly, but a considerable number seem to have cherished a tolerance to uncleanliness, poor ventilation, and other customs not in accord with health requirements. By means of the school nurse they can learn the practical rules of sanitation.

Our modern efforts for compulsory education would have little significance without good school attendance, which largely depends on early detection of disease and early isolation of contagious cases. In San Francisco, the school nurse investigates every case of non-attendance of over three days' duration and uses whatever means are necessary promptly to correct matters. In the percentage of school attendance in the United States, Cleveland stands first with 88.6 per cent; San Francisco is a close second with 88.4 per cent, which confirms the efficiency of a public health department aided by school nurses, and we can now say of our city, with apologies to Bret Harte:

No longer indifferent of thy Fate,
Serene, thou sittest at the Western Gate.

In San Francisco, during the fall term of 1922, the medical school inspectors, of whom there are five, examined 19,897 school children. Twenty-one school nurses during the same period sent out 6777 defect notices and made 12,521 visits to the homes of the children. As a result, 745 cases of faulty vision were corrected; 1325 children had diseased tonsils and adenoids treated; 1581 were treated for carious teeth, and a great deal of work of a less serious nature was the large number of heads treated in ways suited to the occasion, innumerable sores healed, emphasis given to correct posture, and the persistent attention given to health habits in general.

Often the neglected child is an ambulatory pathology showing malnutrition, defective vision, teeth, tonsils, and valvular heart disease. The neglected child is not easily reached until he becomes a member of a school. The school makes the opportunity for the mass attack that enables health nurses and other members of the Department of Public Health to do their healthy work.

(306 Irving Street.)

We may be a bit old-fashioned, for we remember the doctor as he used to be and as he may be again, a balanced, lovable and dignified man who really knew his patients, not merely some specialized phase of their distressed organs and their rating in Bradstreet's.—American Physician.

THE RESISTANCE FACTOR IN FOCAL INFECTIONS

By H. D. NEWKIRK, M. D.
(From the Johnston-Wickett Clinic, Anaheim, Calif.)

I have felt for some time that more detailed study and investigation should be made of certain phases of the tonsil question in its relation to focal and systemic infection. The general principle of focal infection is well established. It has been proved in certain instances that the tonsils were the particular focus causing systemic infection resulting in rheumatic and arthritic conditions, since the systemic disease was entirely relieved following complete tonsillectomy. This has perhaps led some of us rather hastily to conclude that all tonsils showing cryptic debris or other evidence of infection should be removed, and if properly removed would clear up the rheumatic or arthritic condition. This is not always so, even when the most painstaking and thorough examination has been made by a competent physican, and a perfect tonsillectomy done. The longer one deals with these questions, if he is conscientious and follows up his cases, the more he will wonder if there may not be some factors of prime importance which are still unsettled or perhaps not even seriously considered.

A recent article along this line by Alvarez, which appeared in the Journal of the American Medical Association for May 26, 1923, is very illuminating. Alvarez shows that the results obtained by removal of tonsils in adults for certain chronic systemic conditions are, to say the least, very disappointing. It may be that many of the patients mentioned in his report, since they came to him from various localities, had had tonsillectomy done elsewhere. Yet the fact remains that tonsillectomy was done in certain instances on the grounds that the tonsils showed infection, and for the purpose of remedying a systemic condition, and, as an illustration of our point, but 10 per cent of the cases in which they were removed for "rheumatism" showed good results. Also, it is possible that certain of those in the rheumatic or arthritic group who were benefited by tonsillectomy had some other treatment such as extraction of infected teeth, physiotherapy, or climatic advantage which was the beneficial factor, rather than the tonsillectomy. Or that had these same patients who reported improvement by tonsillectomy taken the Abrams or Christian Science treatment, they might have reported as favorably. Statistics, especially medical statistics, are hard to interpret, but even those obtained from a series so small as Alvarez has given call for serious consideration. There are doubtless many good reasons for doing tonsillectomy, but we must know more about what will happen to the system as a whole after this operation is done, or what would happen if it were not done, if we are to give an intelligent prognosis in this class of cases.

Just as individuals vary in size, appearance, and so forth, it is reasonable to suppose that they vary in the matter of resistance to infection. One patient has a ruptured appendix and dies. Another has practically the same condition and makes a good recovery. So, through the whole list of diseases, one patient reacts favorably and another does not. Why is this? Allowing for difference in

virulence of bacteria and duration of the infection, we still have the major factor of resistance to infection or immunity which is of much importance in giving a prognosis, and especially in the matter of focal infection. If we had some way of measuring from time to time the resistance of an individual to a particular focus of infection, we could then make a graph showing whether he was approaching the danger-line or receding from it, and determine whether a tonsil, even though it contained cryptic material, should be removed in order to prevent the patient crossing the danger-line and developing rheumatism or arthritis. On that same basis, if tonsillectomy was done, the infection curve should subside. Whether this resistance should be measured in terms of blood chemistry (blood urea or sugar tolerance), by lymphocyte counts, or in some other way, we do not know, but it seems of sufficient importance to warrant the most exhaustive studies and experimentation.

A questionnaire recently sent out to a number of laryngologists and other physicians on this subject brought the following results:

Q. Is the resistance of the patient an important factor in estimating the progress of a focus in the tonsils?

A. Yes, 25; no, 3.

Q. Do you know any method of measuring individual resistance?

A. No, 24; by ancestry,1; by diet, hygiene, exposure, infection, habits, etc., 1; by resistance to other infections, 1; by clinical judgment, 1.

The fact that twenty-five out of twenty-eight were very emphatic in their belief that resistance is an important factor, three only not being sure of its importance, and yet twenty-four had no way of measuring that resistance, is most interesting.

If future studies along this line result in accurate methods of resistance estimation we may, at least, be spared the criticism incident to ill-advised tonsillectomies. Also, we may be able to persuade many patients, certainly headed toward rheumatic torture in later life, to permit thorough search and adequate attention to foci while there is yet time.

DISCUSSION

Jerome B. Thomas, Frazer Building, Palo Alto—I agree with the author that it is highly desirable to be able to measure the resistance of the human organism to bacterial infection, in the interest of a clearer understanding of the nature and course of disease, and hence of more intelligent treatment and prognosis. But even if we should devise a reliable and practical method of measuring resistance, the latter may be so easily and rapidly lowered by fatigue, trauma, acute complicating infections, etc., that I cannot feel that even a high degree of resistance would justify us in a policy of watchful waiting in case of a chronic systemic infection accompanied by frankly diseased tonsils. The practical question at issue is, under what conditions are we justified in advising the removal of tonsils suspected of causing systemic infection "resulting in arthritic and rheumatic conditions"? Granting the importance of individual resistance, I consider it axiomatic that, in the event of chronic systemic diseases, such as arthritis, endocarditis, etc., all known foci of infection should be removed if possible, whether the resistance of the patient be high or low. The patient should be warned that there may be more than one source of infection and that several bacterial foci may have to be eliminated in order to afford him the largest measure of relief or safety. If there be reasonable doubt as to the infectious role of the tonsils it is my practice to advise attention first to the dental and other foci. If this course is without result or only partially successful, I often advise removal of tonsils on suspicion, having in mind the facts that fairly innocent-looking tonsils occasionally show deep-seated areas of disease when removed and sectioned, and that the modern operation of tonsillectomy performed by a skillful throat surgeon is almost free from danger. It goes without saying that the best interests of the patients are preserved when the laryngologist works in association with the general physician and internist.

Saxton Pope, Butler Building, San Francisco—The indictment against the tonsil is such a serious one, and the direct evidence is so convincing, that it will take more than a speculative doubt to withhold a just sentence. It may be stated quite frankly that there are no innocent tonsils. In childhood they are the atria for lymphatic tuberculosis; the constant point to entrance for the streptococcus of multiple infectious arthritis and endocarditis; they are the nidus of absorption for myalgias and neuritis; they are definitely implicated in many chronic arthritides; they are a flagrant cause of foul breath, and I hesitate to enumerate a more extended list of their crimes. The sin of removing them is at worst only that of violating the sanctity of the human body divine, so earnestly protested by the chiropractors. 'Tis true that an occasional mishap results from the surgery, and that a few neuropathic singers have assigned their loss of voice to tonsillectomy, though this may be a blessing in disguise. In fact, the die is cast, let the game go on. In the words of that great modern poet, let us say, "Yes, we have no tonsils today"!

Harry R. Oliver, Flood Building—When we take into consideration the amount of investigation that has been carried out and the definite relation of focal infection to infections of the systemic structures, as well as, particularly, in arthritic and cardiac diseases, and the fact that the tonsils are most often the most prominent offending tissue, it would be the most logical procedure to remove them as possible or probable factors. In the examination of large numbers of tonsils, there is almost always some evidence of diseased condition to be found, and when in a diseased condition they are in most instances of no further value for the purpose nature intended, and had as well be removed as of no further use as resistant or protecting agents. There seems to be no chemical or biological method of testing the resistance of patients to infections of this nature, and one has to use his own judgment and make his own interpretation from the physical and other characteristics of the individual patient.

H. D. Newkirk (closing)—The general tenor of the discussion is that diseased tonsils should be removed, and with this I am entirely agreed even to the limit of 100 per cent if it can be shown that this figure is correct. I doubt, however, if the percentage is as high as that. If we agree that 100 per cent tonsils are diseased and should be removed, we may as well make it a religious seventh-day rite or have an amendment to the Constitution to that effect and be done with it. If I voted for such a measure I would hardly know how to answer some of these robust octogenarians who still have their tonsils and even a few teeth. I fully realize that at present we have no way of estimating resistance, and it was with the hope of stimulating such studies that this paper was written. The importance of this applies not only to tonsils, but to possible latent infection anywhere in the system. If successfully worked out, each time a healthy man had a physical examination his resistance level could be ascertained just as his blood pressure is measured, and a comparison of several of these readings taken at stated intervals would show him the increasing importance of a scrutinizing search for all foci, thereby avoiding a breakdown with systemic infection.

THE FLEXIBILITY OF ETHER VAPOR ANESTHESIA*

By LORRULI A. RETHWILM

A number of articles have been written about vapor anesthesia since Junker, in 1867, first blew air through chloroform and Clover, in 1877, vaporized ether. Some of these recommended its use intratracheally; others extolled some different machine, for many forms of apparatus have been invented. I am going to make a plea, however, for the more frequent use of ether as vapor.

It is now generally accepted that ether vapor is the anesthetic of choice for the anesthesia for tonsillectomy and all work about the face or neck, but its value for other cases, as for instance gall-bladder work, has not as yet been fully appreciated.

One of the advantages claimed for it is smooth induction. We find a nitrous oxid-oxygen ether sequence even more rapid and more pleasant to the patient and use this form of induction even in children. In babies a few days or weeks old we usually begin with the vapor, together with ether dropped on the vapor-mask.

The vapor we give is sometimes ether with air, and at times ether with oxygen, or we may pass both air and oxygen through ether at the same time. We consider the vapor formed in this way less irritating than that produced by dropping ether on a heated surface to vaporize it, and letting that pass to the patient.

The method of administration depends entirely on the case. We may pass a catheter into the pharynx through the nose, or occasionally through the mouth; we frequently use a vapor-mask covering mouth and nose, and at times insert a mouth hook, at the same time using a wire airway. These are our usual methods of administration. We do not use a closed method, but prefer the semi-open, though I admit it uses more ether than the closed.

Six thousand four hundred and nine anesthesias were given at Stanford Hospital in two years, starting June 1, 1921. Excluding 1698 of these, as they were nitrous oxid-oxygen and some spinal anesthesias, of the remaining, 2831 were vapor anesthesias, 1685 of these were tonsil cases or combination tonsillectomy or tooth extractions. The remaining 1136 cases of vapor anesthesia I have roughly classified into groups as follows: Oesophagoscopy and bronchoscopy, 28; dental cases, 96; other nose and throat work, 108; mastoid operations, 112; eye operations, 97; mouth, jaw, or tongue operations, 60; cleft palate and harelip, 20; thyroidectomies, 33; brain cases, 33; Hibbs, Albee, and laminectomies, 22; gall-bladder cases, 31; gastroenterostomies, 8; exploratory laparotomy and abdominal work, 34; laparotomy and minor operations, 138; appendectomies, 41; hernias, 37; proloric stenosis in infants, 6; rectal cases (mostly Kraskies), 12; kidney and ureter operations, 20; other genito-urinary operations, 36; breast amputations, 19; pilonidal cyst, 2; miscellaneous, 153.

We do not let internes use vapor on clinic cases, even though supervised, until they understand the drop method and the condition of their patients. We always caution them that patients can very readily be put too deeply asleep with vapor, and that they must watch them carefully. The margin of safety is much greater when oxygen is used. Still, we hear of deaths from ether vapor anesthesias occurring from time to time—mostly not published—and these could be avoided if articles extolling the values of ether vapor would mention its danger. One more point is that, when vapor was first used, the machines were at times put together wrong and liquid ether would flow to the patient and cause death. We avoid the possibility of this by inserting a Murphy drip-bulb, without a hole, in the tubing that passes from the machine to the patient. With these two cautions, I can pass on to the many advantages of ether vapor.

I cannot write of ether vapor anesthesia without writing of oxygen-ether vapor, as we use oxygen for most of our cases. We do not heat our ether, nor do we blow air through it so rapidly that ice collects on the bottle. The air may be passed through two bottles of ether if necessary to have a strong vapor. We agree with Cable that ether vapor given to the patient at the end of a three and a half foot hose is usually at least within a degree of room temperature. Even a somewhat shorter hose will give the same, according to our tests.

One of the greatest advantages of ether vapor is that, if the breathing is shallow or depressed for any reason whatsoever (patient nervous or as found in some gall-bladder cases) and is not of sufficient warmth or depth to vaporize the ether dropped on a mask, this vapor given ready to inhale will reach the patient's lungs and put him to sleep without delay, and good relaxation is obtained in a very short time.

Although for most operations the patient is satisfactorily relaxed with ether vapor when his eyes are still rolling, deeper relaxation can be obtained in a few breaths by giving stronger vapor. This we do when the abdomen is being explored, when traction is made on the gall-bladder if the surgeon insists on profound relaxation, or at any time if for any reason the patient must be more relaxed. As soon as the manipulation or other cause for profound relaxation has passed over the quantity or strength of vapor is immediately reduced. This flexibility is especially valuable when, for instance, a surgeon unexpectedly decides to feel the gall-bladder at a time when the patient is lightly anesthetized.

During the entire course of the anesthesia there is an even maintenance—just the depth is varied—which can be done either by decreasing the rate of flow of the air or oxygen through the ether, or by cutting out one bottle of ether, or by having only part of the oxygen bubble through the ether. One of the chief reasons for the flexibility lies in the fact that the vaporized ether is ready for inhalation (and as I have mentioned, the patient will get it into his lungs even if he takes only small, shallow breaths). This is true provided there is an open airway, which must always be maintained not only for the smoothness of the anesthesia itself, but to

*Presented to the Section on Anesthesiology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

prevent a high tension of carbon dioxid in the alveoli, which raises blood pressure. Moreover, laboring to breathe adds an extra strain to the patient.

This open airway can be secured in any number of ways, depending on the nature and site of the operation. In many patients nothing is necessary; some require a wire or other airway in their mouth to breathe freely. Again, a catheter may be inserted in each nostril to the pharynx—one catheter for the anesthetic, the other one for the patient to exhale through or for use with suction. We have never found it necessary to use intratracheal insufflation in any of our work, and in our use of vapor find all the advantages claimed for it without some of its disadvantages. In fact, intratracheal is being used less and less everywhere.

We keep all of our patients anesthetized as lightly as is consistent with the work that is being done. When giving drop-ether we have repeatedly been able to regulate the amount so nicely that the patient was awake on leaving the operating-room. However, with ether vapor, especially when given with oxygen, the patient receives less ether, is maintained asleep more evenly, and can be put more deeply and lightly under with more readiness than with any other method.

Because of the small amount of ether given, and because we prefer to keep the patient very lightly asleep at the close, we do not wash the stomach as a rule. In gall-bladder cases or in patients that have had fecal or other vomiting, we do wash the stomach.

In all cases where the stomach is not washed, the patient can be nearly awake at the close—how much so depends more on the surgeon and the nature of the operation than on the patient or the anesthetist.

It is known to any anesthetist that some patients require more anesthetic than others to relax them. Even the same patient may take more at one operation than at another, even for the same kind of surgical work, and naturally requires more during some procedures than during others, even at the same operation. We find ether vapor quickly and smoothly covers all these conditions, and a patient can be put sufficiently deep with a few breaths of ether vapor where several times as many breaths of drop-ether would be required.

The flexibility of the anesthetic is especially desired by those doctors who have the patients welfare enough in mind that they want to keep them anesthetized as lightly as possible. Of course, if a surgeon cares only to have his patient absolutely relaxed throughout, vapor anesthesia would fill that requirement, too, but that is not why it is recommended.

There are a few serious heart cases that have really had a form of vapor anesthesia, though not listed as such. We have found that some myocardial degenerations, and others that were really bad risks, do perhaps best of all on a nitrous oxid-oxygen anesthesia with about 30 to 50 per cent oxygen, never giving less than 25 per cent, and adding a small amount of ether vapor from the attached ether container.

In conclusion, I must say that many advantages originally claimed for intratracheal and other vapor methods, are now found in almost any good skilful administration of anesthetics. These are, for instance, absence of delirium at start and finish, practical freedom from mucus, very little vomiting, and a much better condition of the patient at the close.

Ether vapor, especially when given with oxygen, surpasses other forms of ether administration in giving: (1) Even maintenance; (2) perfect relaxation with less ether; (3) proper oxygenation with less demand on the muscles of respiration and on the circulation than other methods.

Wound up with, and at the bottom of these advantages, is the perfect flexibility of this form of ether, whereby the level of anesthesia can be readily and smoothly changed at any time.

THE TREATMENT OF KELOIDS WITH RADIUM*

By LAURENCE R. TAUSSIG, M. D., San Francisco

In the minds of the majority of laymen and also many medical men, radium therapy is adapted only to neoplasms. This is far from true. There are quite a number of non-malignant conditions that are not only amenable to the rays of radium, but in which radium is the treatment of choice. One of the outstanding members of this group of benign conditions is keloid.

These stubborn new growths occur following some trauma and if excised almost invariably recur, usually in a worse form than before. Various forms of treatment have been tried. Surgery is sometimes successful, but only when the excision has been exceedingly wide, at least as radical as for a very malignant neoplasm. Surgery, either preceded by or followed by radiotherapy, either with the X-ray or radium, is frequently successful and is the method of choice in certain very extensive keloids. In certain cases X-ray alone is indicated. Properly applied, the X-rays are often capable of producing good results, particularly in recently acquired lesions. Recently some investigators in Germany have reported good results by the digestion of these growths with pepsin.

A keloid is essentially a hypertrophic scar. In some instances it is difficult to differentiate between a simple scar and keloid. Usually a lesion is classified as a keloid which is raised, shiny, hard, and pink to waxy in color which has developed following some sort of abrasion. There are frequently root-like extensions fading into the normal skin, but this is not always true. The cause of keloid formation is not known. People vary greatly in their susceptibility to them. Some develop keloid following any type of abrasion. It is the impression of most dermatologists that they develop most readily in negroes and other dark-skinned races, though they are seen in fair-skinned persons. Sometimes a patient will develop keloid following an apparently insignificant injury, without a history

* Read before the Section on Dermatology and Syphilology at State Society Annual Meeting, June 22, 1923 at San Francisco.

of having previously developed one, and may never again develop keloid. Among the traumata, burns are the most likely to cause keloids, especially extensive ones that are slow to heal, especially when there is secondary infection. Acne so frequently leads to keloid formation, especially on the back of the neck, that we have a clinical entity, keloid acne.

Keloid usually starts to develop shortly after healing has taken place and often increases for several months. Having reached its maximum growth, it remains stationary. There is no likelihood of malignant changes occurring. There are, however, progressive changes which make a lesion that has given no trouble and which has, therefore, not been treated, become increasingly unpleasant to the patient. These consist of a gradual contraction and hardening, due probably to a progressive decrease in vascularity. When it is first formed, a keloid is usually soft and pliable, but it later becomes almost cartilagenous.

The patient comes for treatment for one of several reasons. Probably the most frequent is on account of the disfigurement. This is particularly true of lesions developing on the face and neck. Impediment of activity brings in a few, especially those occurring in the popliteal space and in the antecubital area. Keloids are now and then quite painful, either due to their position or simply on account of the contraction. Probably the greater number of keloids are never submitted for treatment.

As in the treatment of most benign lesions, the chief requisite of a method of treating keloids is the production of the best possible cosmetic result. It is manifestly impossible to replace a keloid with normal skin by radium therapy, but it is possible to give the patient a thin, supple scar, level with the rest of the skin, and painless. It is usually dead-white in color, or becomes so a few months after treatment is finished. This ivory-white can if necessary be quite well camouflaged by the use of one of the walnut stains, particularly if the patient's skin is not too fair. Two conditions govern the probability of a good result by radium therapy. The first is the extent of the lesion and the other is its hardness. For very extensive lesions, especially those involving large portions of the chest or limbs, we are inclined to use X-ray alone, reserving radium for any recalcitrant areas. When a rapid result is desirable, operation may follow the first radiation and the scar again radiated. The result of this procedure is rarely as satisfactory from a cosmetic point of view, even when successful, as that following radiation therapy only. The hardness of the lesion depends on the time it has been present. Therefore, we would rather start treatment as soon after the keloid begins to form as possible, and before it has reached its full growth. A pink, supple lesion gives an infinitely better prognosis than a contracted, waxy, hard one. We must always bear in mind the possibility of the production of telangiectases by our treatment with radium, but it has been our experience that even very intensive treatment of keloids is less apt to produce this result than in any other skin condition. It must also be remembered that keloid, untreated, often presents telangiectasia and this should be brought to the attention of the patient.

In the treatment of keloids with radium we have in general two methods to follow. The more conservative is the use of the penetrating beta and gamma rays only, and the grading of the dose so as to produce no visible reaction at any time. The more radical is to make use of the superficial beta rays as well as the harder rays, producing moderate to rather severe reactions. The first method is championed especially by McKee, who insists that only the slightest reactions are permissible in radium therapy as well as in X-ray therapy. We have made use of both methods at various times, and believe that both are capable of producing good results, but that the more conservative method is likely to be useless in the case of a very thick, hard lesion and is always much slower. Hence, we practically always make use of all the available rays and give fairly stiff reactions. They heal promptly, and we have seen no case in which extensive telangiectasia resulted. Either radium plaques or tubes containing radium salt or emanation may be used. It is essential to protect the surrounding normal skin with lead foil, in order to make the scar from treatment as small as possible. Keloid tissue requires a much greater amount of radiation to cause a reaction than does normal skin. Also thin, soft keloids react more readily than do the hard, thick ones. We usually give an initial dose with a half or quarter strength plaque screened with 0.1 mm. of aluminum for one to one and a half hours, using lead foil as required to protect the contiguous skin. If the keloid is linear or if tubes only are available, we start with a dose of twenty millicurie hours for each tube, screened with 0.5 mm. of silver and 1 mm. of rubber tubing. If the lesion to be treated with tubes is not linear, we try to space them 1 centimeter apart. The patient is seen again in about three weeks and if there has been no reaction, another treatment is given. If the reaction is severe, no further treatment is given until it has entirely subsided, and then a somewhat smaller dose is adminstered. During the period of reaction, soothing applications only are indicated. If the lesion is located so that it is subject to more or less friction from the clothing, a dressing of boric ointment or plain vaseline is used. If it is not subject to any irritation, a thick calamine lotion is applied two or three times a day. Very moderate reactions are sometimes pruritic, and when this is true, calamine lotion is used. We have found that the most prompt and satisfactory results follow superficial ulcerative reactions. It is not necessary to invoke such a reaction, however, in very recent small lesions. Following the treatment with radium, especially if the reaction has been quite marked, the scar will be quite a bright red for a time, but will fade to white in a few months. There is likely to be a ring of pigmentation about the scar, but this also will disappear with time. It is desirable to remove the keloid with as little radiation as possible and, therefore, when we are in doubt as to whether to give another treatment or not, we would rather err on the side of waiting a little longer.

The growth often continues to shrink for several weeks after the last reaction.

CONCLUSIONS

1. Radium is the treatment of choice for most keloids.

2. Treatment should be instituted as early as possible to obtain the best results.

3. In practically all cases a moderate to severe reaction should be given, using the soft as well as the hard rays.

(135 Stockton Street.)

DISCUSSION

Harry E. Alderson, 240 Stockton Street, San Francisco—We have been using radium extensively at the office and Stanford skin clinic for several years. Most of our cases treated by radium have been epithelioma. Next in frequency we have vascular naevi, then warts and, lastly, hypertrophic scars and true keloid. Our results have justified our increasing our supply of radium. To meet growing demands of physicians, the need of a large radium emanation plant in San Francisco, where the emanation tubes can be obtained readily by anyone competent to apply them, is a most urgent one. This will be provided soon.

In using radium one must very carefully consider the pathology of the condition to be treated. Failure to do this and indiscriminate applications of radium have been responsible for failures. The technical application of radium itself is not difficult and requires no special skill. A pathological diagnosis and the decision as to dosage are of paramount importance.

It is true that radium will destroy tissue, malignant or normal; but it is not indiscriminate destruction that is desired. Injudicious applications and improper screening may produce most serious and disfiguring results. It must be remembered that radium destroys most readily cells of the rapidly growing embryonal type, and that in moderate doses it stimulates normal connective tissue cells. This accounts for the satisfactory resultant scars after a properly treated epithelioma. It also accounts for the good results in young growing keloids. We have treated many hypertrophic scars and some true keloids with radium alone and combined with surgery. From our experiences we believe that surgery and radium combined give the best results. Careful extirpation of the lesion and then prompt radium treatment will give good therapeutic and cosmetic results. In the matter of dosage for these scars, we prefer the hard beta and gamma rays. Protection of the treated lesions against irritation from clothing and other objects, as mentioned by Dr. Taussig, is of great importance.

We are indebted to the writer for an interesting and instructive paper.

Hiram E. Miller, 135 Stockton Street, San Francisco—In discussing the treatment of any condition with one single agent, the other modes of therapy are often lost sight of or are undeservedly relegated to a place of minor importance.

There are certain extensive keloids that are best treated with X-rays; there are other smaller ones that, due to their location, can be more advantageously treated with radium, and there is a larger group of medium-sized lesions that can be satisfactorily treated with either X-ray or radium. Surgery in conjunction with radiotherapy may be necessary in certain old and disfiguring lesions. In the superficial and early cases 1 Holzknecht unit of unfiltered therapy at skin distance administered every four weeks will not give a reaction and will cause gradual absorption and softening of the pathological process. In the older and thicker lesions filtered therapy should be used.

I do not think that we are justified in getting severe reactions in the treatment of this benign condition with either form of radiotherapy. The lesion will involute without a severe reaction, the patient will be more comfortable during treatment, and the end result will be as satisfactory even if the period of cure is somewhat more prolonged.

Charles E. Schoff, Farmers and Mechanics Bank Building, Sacramento—In the treatment of keloids there are a number of factors entering into the problem as to which is the best method of removing them and producing the best possible cosmetic results. The area involved, the anatomical position, the character of the growth, and the pathological changes present all enter into the question as to the method of treatment, whether it be by radium, X-ray or a combination surgery with radiotherapy.

One must be familiar with the pathological changes that have occurred and be able to clinically estimate these changes in making the choice of treatment. The early types seem to respond very rapidly to the beta rays of radium and to give splendid results as far as cosmetic results of a scar go.

The older, more fully organized hypertrophies are much more resistant, require more intensive raying and over a longer period of time to accomplish their dissolution, and the after results are not usually so cosmetically scar perfect, as there is the probability of producing evidence of intensive treatment in the adjacent normal tissue and over the affected area also.

I do not think that any one method of treatment should supersede the others, and we should not forget that we have other methods to combat this condition, and it should be treated with conservatism rather than with enthusiasm.

Dr. Taussig (closing)—I agree with Dr. Miller that it is well to keep in mind the various therapeutic methods adaptable to a given case, trying to pick the most suitable.

My experience with X-ray in the treatment of keloids has been limited to a few cases. The patients I have seen who have had surgery combined with X-ray have not had results superior or even equal to similar cases treated with radiotherapy alone, though the result was attained more rapidly. As to the matter of technique, I am quite sure that the use of moderately hard beta rays—that is, screening equivalent to 0.1 to 0.5 mm. of alumimum—is very helpful. I also think that an erythematous reaction up to the point of a superficial blister is justifiable and safe.

The Differentiation of Normal and Pathologic Human Thyroid Glands by Serologic Methods—Experiments were made by W. I. Terry and H. C. Shepardson, San Francisco (Journal A. M. A., October 27, 1923), to determine whether or not the substances secreted by the abnormal thyroid gland varied to any extent from the secretions of the normal gland. The complement-fixation reaction was selected. Extracts made from normal thyroid glands of pigs were injected into rabbits, and the serum thus obtained was found to be capable of deviating complement in the presence of homonymous antigen. Extracts made from normal human thyroids were found to react in a manner similar to the extracts obtained from normal pig thyroid gland. Extracts were then made from pathologic human thyroids, adenomas being selected because of the ease with which normal glandular tissue could be removed. The serum obtained by injecting the latter extracts into normal rabbits was likewise found to be capable of fixing complement in the presence of the homonymous antigen. The results so far obtained indicate a demonstrable difference in the extracts of normal human thyroids and those of adenomas.

ELECTROTHERMOCAUTERY TREATMENT OF LEUKORRHEA DUE TO ENDOCERVICITIS*

By LINDSAY PETERS, M. D., Alameda, California

So common a complaint is leukorrhea, so manifold the misconceptions concerning it, so inadequate the treatment which it usually receives and so potent for evil its neglect that I trust it may not be amiss to ask your attenion for a brief consideration of its cause and treatment.

There is perhaps no condition more frequently encountered in the treatment of women than leukorrhea; so common, indeed, is it that many women and some physicians appear to regard it as a normal and inevitable condition in the adult female. As a result of this erroneous idea, many a woman is subjected to the annoyance of frequent baths and douches in an effort at cleanliness; many suffer discomfort and even actual pain from the irritation of the discharge, and many others (how many one cannot tell) develop cancer on account of it.

I have referred to leukorrhea as though it were a disease in itself; but let us not continue to do so, for it is important to understand it as a manifestation of disease and not itself a pathologic entity. In the past it was generally regarded as evidence of endometritis, but routine microscopic examination of uterine curettings, in the days when curettage was an every-day procedure, revealed the fact that endometritis very rarely exists. On the other hand, both clinically and in the routine pathologic examination of uteri, inflammation of the cervical canal, known as endocervicitis, is of exceedingly common occurrence. Through this knowledge we have finally come to an appreciation of the fact that, omitting the transient, white discharge attending menstruation and the puerperium and the vaginitis of childhood and old age, leukorrhea practically always means endocervicitis. The frequency of occurrence of this condition during the epoch of sexual activity is due mainly to infected lacerations of the cervix and venereal infections. It is a matter of common knowledge that the nabothian follicles of the cervix, like Skenes' glands and the vulvovaginal glands, furnish ideal conditions for the perpetuation of an active gonorrheal infection, so that a chronic inflammation may remain at that site after it has died out elsewhere. Not always, however, is an endocervical inflammation due to these causes, for it is encountered not rarely in virgins. In these cases, although the condition may occasionally be the result of persistence of a gonorrheal infection acquired in childhood, as a rule the inflammation is due to some micro-organism other than the gonococcus. Occasionally the infection may be syphilitic or, still more rarely, tuberculous.

In the common forms of chronic endocervicitis, the infecting organisms are the streptococcus, staphylococcus, colon bacillus and gonocóccus, practically always occurring as mixed infections.

Leaving out of consideration cervical chancre and uterine tuberculosis, let us consider for a moment the visible signs of chronic endocervicitis. When one exposes the cervix, besides the leukorrheal discharge one notes reddening and swelling of the mucous membrane of the external os and the cervical canal. The swelling may be so great as to cause an eversion of the red, endocervical mucosa. The inflamed area has a coarsely granular appearance, and the cervical canal usually is plugged with a thick mucus, which may have an opaque, yellow color from admixture with pus. On the vaginal surface of the cervix, adjoining the external os, erosion of the mucosa by the irritating cervical discharge is frequently observed. In many cases, small cysts are grouped around the inflamed area; these are formed by the closure of the mouths of nabothian follicles and are often deep-seated. Occasionally the inflammation is confined almost or quite entirely to the canal of the cervix, giving little external evidence of its existence. This condition may co-exist with a pin-hole os, leaving a reddening of the os, a mucous plug and a leukorrheal discharge as the only clues to its presence.

The true significance and importance of chronic endocervicitis have only in recent years been fully appreciated. Neglect of it has probably been due to failure to include inspection of the cervix in the routine physical examination and to an aversion on the part of gynecologists to what has been called office "tinkering." However, consideration of the following facts cannot fail to impress on us the possible evil which may result from ignoring even so common and apparently insignificant a lesion as chronic endocervicitis:

1. It is often attended with pains in the pelvis and back, which disappear without other treatment when the endocervicitis is cured.
2. It is a focus of infection, in some cases capable of producing systemic effects, just as is the case with focal infections elsewhere.
3. It is a common cause of sterility.
4. It is a point of constant irritation, which may result in the production of cancer.

In the past, the treatment of endocervicitis has been a veritable *bete noire* for both the general practitioner and the gynecologist. The "sure cures" for it were legion, just as is the case in other conditions for which there is no dependable remedy.

We have all seen these patients who have made the rounds of general practitioners and specialists without relief from their disgusting and annoying discharges, and after running the gamut of the infinite variety of douches and possibly some topical applications. These patients were in former times subjected to deep cauterization with lunar caustic or to amputation of the cervix, but the caustic sometimes caused cicatricial closure of the cervical canal and perhaps produced hematometra or pyometra, and amputation of the cervix in childbearing women resulted in miscarriages or dystocia from cicatricial contraction of the cervix. In some cases, trachelorrhaphy was done in attempting to eradicate the diseased tissues, but recurrence was the rule; so that even these radical methods of treatment were far from satisfactory. Bearing in mind the pathology of the condition, it is easy to understand why douches are beneficial only as cleansing agents and cannot cure; it is also seen that the logical treatment is one directed toward

* Read before the Section on Obstetrics, Gynecology, and Abdominal Surgery of the A. M. A., June 29, 1923.

the eradication of the infecting organisms; and, as the inflammation usually extends well up into the cervical canal and into the very depths of the nabothian follicles, any treatment that is superficial in its effect and does not act on every part of the diseased tissues is doomed to failure. This explains why treatment with strong silver nitrate solutions, although producing prompt improvement, will rarely effect a permanent cure, and why Sturmdorf's conical excision of the cervical lining has not come up to expectations.

A new interest was awakened in the treatment of leukorrhea with the publication, in 1915, of an article by Guy L. Hunner on the treatment of leukorrhea with the actual cautery. Hunner, after dilating the cervix, made deep, longitudinal cauterizations in the canal of the cervix with the actual cautery, which resulted in permanent cure of the leukorrhea, without cicatricial contraction or other damage to the cervix. This was a great advance in the treatment of endocervicitis, and the only improvements subsequently made have been in the manner of carrying out Hunner's idea. The benzene cautery, which he used, was somewhat cumbersome and difficult to keep in working order. For this reason I have used the more handy and dependable electrothermocautery, so much employed in nose and throat work, instead of the benzene cautery. With this the degree of heat is readily controlled and deep, narrow cautery incisions, as well as punctures for cysts, can be made with it. It has the advantage also of permitting the use of the heat only where and when it is needed, so that the patient need not be frightened by feeling the heat in the vagina during introduction and withdrawal of the cautery.

Why the use of the cautery should be especially efficacious in curing endocervicitis due to gonorrheal infection is apparent when one recalls the susceptibility of the gonococcus to even comparatively low degrees of heat. Observers have reported the destruction of this organism in the tissues by prolonged immersion in hot water, by hot air treatment and even by hyperpyrexia.

In using the cautery it seems probable that a degree of heat is produced in the tissues between the cautery incisions sufficient to kill the infecting organisms without destroying the tissue cells.

The only other agent of which I know that might be capable of producing results as satisfactory as the cautery in the treatment of endocervicitis is radium. With this I have had no experience. On account of its expense and the limited supply, it is not likely to become available for general use, and would in any case be safe only in the hands of an expert. It is said to be efficacious when properly employed, but cases of stenosis of the cervix resulting from its use are mentioned in medical literature, and it entails a risk of producing sterility by its action on the ovaries or possible abnormalities of development of the ovum in the event of subsequent pregnancy.

Although my experience with the use of the electrothermocautery in the treatment of leukorrhea due to endocervicitis has been most satisfactory so far as results are concerned, it does not include a large series of cases, and for this reason I would not have ventured to present this method as the most satisfactory manner of curing the condition under consideration had it not been that Robert L. Dickinson of New York has recommended the same method as the result of his experience with a large clientele.

I began the use of the electrothermocautery in the treatment of endocervicitis without knowledge of its use for this purpose by anyone else, and I find that the method I have used differs from that of Dickinson only in that I employed local anesthesia by infiltration of the cervix, while he apparently has not used any anesthetic except pure phenol (carbolic acid) in a few of the most sensitive cases. I offer this communication, therefore, as a confirmation of Dickinson's more extended experience with the method.

The technic is brought out in the relation of the following illustrative cases:

Case 1—Mrs. M. E. H., age 23, white, married, had been operated on about one year previously in Richmond, Va.; the body of the uterus and both tubes and ovaries were removed, leaving the cervix. The patient complained of pains and soreness in the pelvis, lower abdomen and back, profuse leukorrhea, constipation, and pain during defecation. Examination revealed the cervical canal, the external os and the vaginal portion of the cervix surrounding the os red, granular, swollen and covered with a thick, glairy mucus. There was a profuse vaginal discharge, and at the vaginal outlet there were excoriations, superficial ulcers, and a fissure in the fourchette. There was also a fissure of the anus. Both fissures were exquisitely tender. The Wassermann test was negative. Under applications of 10 per cent silver nitrate solution to the inflamed areas of the cervix and vaginal outlet, and cauterization of the fissures with crystals of silver nitrate, the condition rapidly improved and all the lesions healed except those of the cervix, which were the fundamental cause of all the trouble. A local anesthetic solution was injected into the vaginal portion of the cervix on all sides until the parts became insensitive. The cervix then was slightly dilated, wiped dry with cotton pledgets, and deep, longitudinal incisions were made in the endocervical mucosa, from above downward, on all sides. The patient was advised to remain quiet at home for a few days, and was told that a slight bloody discharge, a temporary increase in the amount of leukorrhea and possibly some discomfort in the pelvis were to be expected. She was seen about one month after this treatment, and was then free from leukorrhea, pain, and all symptoms of which she had complained.

Case 2—Mrs. L. L., age 22, white, a "grass widow," having one child 2 years old, since the birth of the child had had a very profuse leukorrhea, which caused soreness of the external parts, and she also had backache and a feeling of heaviness in the pelvis. There was a severe endocervicitis, with nabothian follicle cyst formation and excoriations about the vaginal outlet. The Wassermann test was negative. Local applications of 10 per cent solution of silver nitrate were made to the affected areas every three or four days; and, in the intervals between treatments, cleansing douches were used. The external excoriations soon disappeared, and the cervical condition promptly improved, but subsequently the progress was not satisfactory. Three weeks after treatment had been begun, the cervix was cauterized with the electrothermocautery in the same manner as described in Case 1. About one month later the patient reported that the amount of leukorrhea was insignificant, and that she felt well. The cervix looked normal except one small inflamed area,

which I was preparing to treat with a second application of the thermocautery, when the patient confided that she had been indiscrete in her relations with her fiance and had missed her last menstrual period. In view of the possibility of pregnancy, I deferred the use of the cautery, and the patient did not return.

Case 3—Mrs. J. E. G., age 39, white, married, with one child, age 7 years, two years after the birth of the child began to have backache and pain during menstruation, which had gradually increased in severity. She also had profuse leukorrhea. Physical examination was negative except that exposure of the cervix uteri showed a granular ulcer at the upper margin of the external os, and redness and swelling of the endocervical mucosa. Two applications of 10 per cent solution of silver nitrate were made to the diseased cervical areas at intervals of one week. The leukorrhea diminished, but the inflammation persisted. October 13, 1921, the cervical ulcer and the mucosa of the cervical canal were cauterized under local anesthesia as described in the foregoing cases. Two weeks later the leukorrhea and backache disappeared, but later it returned to some extent after exertion in caring for a sick relative. January 5, 1922, the patient reported great relief from the backache, and there had been so little leukorrhea that she had discontinued the douches which she had been using for the last two or three years. Inspection of the cervix showed no sign of inflammation, its appearance being perfectly normal.

1261 Park Street.

EMETIN IN TYPHOID FEVER*

By JOHN V. BARROW, M. D., Los Angeles, and EDWARD A. FRANKLIN, M. D., Los Angeles
(From the general unit of the Los Angeles General Hospital.)

For several years the first of the above authors has been so favorably impressed with emetin in the treatment of typhoid fever, that he has been led to determine its value by its routine use in as large a series of cases as possible. Along with the above study, we have carefully noted the classical symptoms and laboratory findings of the disease.

Two observations, hitherto unreported, have been carefully worked out and the results noted. The first of these is the lack of the association of intestinal protozoa in typhoid. The second observation is the early and almost constant occurrence of a positive "hoemoclastic cisis."

For the purpose of connecting our work with the literature that inspired it, we wish to cite the reports of Frazier beginning in 1911, and carried to a more convincing conclusion in 1915. We omit the literature of numerous isolated but spectacular cases from various parts of the world. There are criticisms of the method based entirely on laboratory experiments. The same investigative source substantiates its use. There is no outstanding criticism of the method based on clinical experience or research.

We have taken 100 cases, treated by the regular routine in vogue just previous to this work, and compared them in detailed percentages with the cases treated by the use of emetin. The points of economic and vital interest to public, hospital, and patient may be summarized briefly as follows:

First. The source of infection is always through the unsanitary management of an active case or through an unrecognized carrier. Therefore, any treatment that tends to render patients bacterially sterile is, at once, both clinically and economically of great value.

Second. The length of illness is of great importance. It involves suffering, expense, and danger of life. The number of days the patient is incapacitated is readily reducible to ledger figures. The lessening of suffering is not debatable. The death ratio in contagion is inversely proportional to the time and virulence of the disease. The hastening of a favorable termination by a single hour may save a life.

Any treatment that protects against the spread of disease or renders that disease less virulent, will decrease morbidity and work a public good. In order to show that the favorable statistical report that follows is not due to a fluctuating morbidity, we quote the following from the Eleventh Annual Report of the A. M. A. on typhoid fever.

"Deaths from typhoid per 100,000 population. Los Angeles, average by years, 1906-1910, 19.0; 1911-1915, 10.7; 1916-1920, 3.6; 1921, 2.6; 1922, 3.7." The cases untreated by emetin were taken from 1921, the year of lowest morbidity for our community.

The following table shows the comparison between sixty-one patients treated with emetin and one hundred treated by more usual methods.

	Patients Recovering		Fatal Cases	
	Not treated by emetin	Treated by emetin	Not treated by emetin	Treated by emetin
Onset to admission in days..	13.8	12.7	13	14
Onset to convalescence.....	41.3	24.9		
Onset to discharge or death..	58.1	42.7	24.6	23.75
Admission to discharge or death	44.75	32	12.3	9.75
Days spent in hospital.....	44.75	32	12.3	9.75
Percentage of deaths			16	6.5
Days saved in hospitalization per 100 patients		1275		
Lives saved per 100 patients.		9.5		

It will be noted that the treatment markedly shortened the course of the disease. The convalescence was not only decidedly hastened, but the severity of the disease lessened. No effort was made to hasten patients through before they were truly ready for home care. An additional five days per patient could have been gained by such a procedure. As the account stands, institutional care is saved at the rate of 1275 days per 100 patients. The above is negligible in comparison with the saving of life. The reduction in death rate from 16 per cent to 6½ per cent is an unimpeachable argument in favor of this treatment.

The complications were at times troublesome, but not of a nature to be influenced by emetin. Below is their enumeration with the number of cases and percentage:

Uncomplicated, 31 or 50.8 per cent; bronchopneumonia (not bronchitis), 13 or 21 per cent; intestinal hemorrhage, 3 or 4.9 per cent; intestinal perforation, 1 or 1.6 per cent; relapse, 3 or 4.9 per cent; cholecystitis, 2 or 3.2 per cent; meningeal symptoms, 2 or 3.2 per cent; otitis media, 2 or 3.2

*Presented to the Section on Medicine at the Fifty-second Annual Session of the California Medical Association, San Francisco.

per cent; pulmonary tuberculosis, 2 or 3.2 per cent; urinary cystitis, 1 or 1.6 per cent; arthritis (acute), 1 or 1.6 per cent; syphilis, 1 or 1.6 per cent; thrombophlebitis, 1 or 1.6 per cent; furunculosis, 2 or 3.2 per cent.

The most common complication is bronchopneumonia. This occurred more frequently in the early cases, and was partly induced by the hydrotherapy used to reduce temperature. Sponge baths were later discarded except for cleanliness. Tepid enemas serve much better for antipyretic purposes.

The behavior of the white cell counts was very carefully studied. Since typhoid is associated with bacteriaemic and toxic conditions of the liver, we decided to apply the haemoclastic crisis test to these cases. The technic followed was, the white blood count on a fasting stomach; the ingestion of 300 cc.'s of milk; the white blood count repeated in one-half and again one hour later. The tests carefully made by internes were checked by Maner, pathologist to the hospital.

In 86 per cent of the series, decided digestion—leukopoenia, is shown in the early blood counts. Whatever may be its significance, this behavior of leucocytes is of service both in the diagnosis and in the treatment of typhoid fever. It occurs very early and if taken in conjunction with the usual typhoid leucopoenia, it helps to establish the diagnosis and it is of prognostic value. The average leucocyte counts of the series are as follows: 6680; 5506 and 5208. In the fatal cases the count was 5350; 5000 and 4600. Every complication except pulmonary tuberculosis increased the leucocyte count, but seldom changed the result of the haemoclastic test. It is also noted that the average count in the fatal cases was more than 20 per cent below the count of those that recovered. The greater the fall in white blood cells the more severe seems the toxaemia.

The haemoclastic crisis may be tabulated along with the other classical tests in the diagnosis of typhoid fever as follows: (1) Positive blood cultures after twelve days, 40 per cent; (2) rose spots at same time, 82 per cent; (3) Widal agglutination test, 84 per cent; (4) Widal haemoclastic crisis positive, 86 per cent; (5) palpable spleen in third week, 89 per cent.

The importance of the haemoclastic test in the diagnosis of typhoid fever seems to us to be well established.

In the early cases, we thought the beneficial effect of emetin might be traceable to the fact that certain cases of typhoid concurrently harbored intestinal protozoa. We, therefore, spent considerable time in searching for the later organisms. To date, we have not found a case infested with protozoa during the active state of typhoid or during convalescence. Whatever benefit is derived must, therefore, be attributed to some other source.

This preliminary report warrants a threefold conclusion:

1. Protozoa do not seem to be present in pathogenic abundance in any of the typhoid cases of this series. The disease would seem to inhibit their growth or destroy them.

2. The haemoclastic crisis as advocated by Widal as a liver-function test, is positive in so great a percentage of typhoid fever patients that its use is of diagnostic and prognostic value. So far as the authors are able to find out from the literature, this test has never been so applied before.

3. The routine use of emetin in typhoid fever is of decided benefit. It seems to shorten the course markedly, lessen complications, and save life. We believe its use will have a great influence in rendering every convalescent free from typhoid bacilli, and that the dreaded carrier will become as scarce as the disease ought to be.

We wish here to express our thanks to Huckleberry, Fox, Barnes, Colby, Keys, Fanson, Burling, Melcher, Bower, and Goldberg for their faithful and scientific work on the ward which made this research possible and of value. Especial appreciation is acknowledged to Medical Director N. N. Wood and to Superintendent Norman R. Martin for their splendid co-operation at all times.

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DISCUSSION

William J. Kerr, University of California Medical School, San Francisco—The report of Barrow and Franklin is of great interest to the medical profession. Although typhoid fever has ceased to be the great menace it once was in this country, there are a sufficient number of outbreaks with the usual mortality to warrant continued study of preventive and curative measures. Personally, I have had no experience in the use of emetin in typhoid fever. The results reported are very encouraging, and are confirmatory of previously reported studies. The outstanding value seems to be in the shortening of the period of illness and in the greatly reduced mortality rate. It should be kept in mind that the mortality rate may vary greatly in different epidemics, sometimes being as low as 5 per cent. It would be of interest to know the diet employed in the series of cases treated with emetin and in those not so treated. High caloric diets have been of value in shortening the convalescence and reducing the mortality. It is important to know whether the patients not treated by emetin were under the personal observation of the authors and whether all other factors such as diet, hydrotherapy, and other therapeutic measures were the same in the two series. I should like to inquire as to the method of administration, dosage of the emetin, and the nature of any toxic symptoms noted. It is of interest that this series of patients showed no intestinal protozoa. I do not know of any previous studies where the stools were carefully examined with this in mind. The hemoclastic test of Widal has not met with satisfactory results in my hands. The variations in the leucocyte counts are so slight, and there are so many conditions of technique to be met, that I have not placed much reliance on them. The results of this series, however, are so uniform that we should perhaps consider the test of more value here than in other conditions. In closing I should like to commend the authors on their interesting report. We need more studies of this sort in the field of applied therapeutics.

Dr. Barrow (Closing)—A final report of this work will be made in a few months. The cases reported are endemic and not from any epidemic. The diet, hydrotherapy, and general care are alike in both groups of cases studied. Emetin hydrochloride is given intravenously in one-third grain doses twice daily for six or eight days. The dosage is then reduced to one injection daily until convalescence is established. By this method no toxic symptoms have appeared in our cases.

EDITORIALS

WHO IS RESPONSIBLE FOR THE CHILD?

> "In carrying forward a program of health education, the school becomes organized to do for the child what was formerly done in the home. In this field the school takes over parental responsibilities in precisely the same way that it has in the field of household and industrial arts."—Jesse Feiring Williams, Hygeia, September, 1923.

That the educational departments of our country have been planning for some time to take over the parental responsibilities in the care of children has been perfectly obvious to those who read the signs of the times. Recently a number of writers on so-called health education of school children have come out quite frankly and emphatically in claiming this right. A number of speakers at the National Educational Association conference in San Francisco brought forward this idea, of the department of education's assuming sponsorship for the development of children and relieving the parents of that responsibility; and at least one of these speakers was challenged at the time.

The quotation at the head of this article is another from a responsible source, and it shows the real object of a large element of the educational influences of our country. If many statements of this character come out through a variety of sources, it is likely that the ultimate program will be defeated, because we are fully persuaded that the American public are not yet ready to make motherhood an incubator scheme and the home a dormitory for the rearing of children under the guidance of Federal, State or any other kind of legal machinery.

COMMUNITY CHESTS

The Journal has many requests from physicians and others to discuss both sides of the "Community Chest" movement. Advocates of the movement are numerous and the points in favor of it have been given the widest possible circulation in all parts of the country.

Persons interested in the other side of the question may secure an interesting pamphlet by addressing P. O. Box 1455, Pittsburgh, Pa. This pamphlet was prepared by a committee of twenty-six important persons who spent a great deal of time studying the question when it was proposed to make Pittsburgh a "Chest" city. Additional information may be had from many chambers of commerce in cities that have not endorsed the plan.

The pamphlet in question says among other things that:

"The Community Financial Frederation tends to make charity a machine, to stifle individual philanthropy, to abridge the rights of both the donors and the agencies, and its few advantages do not constitute adequate compensation for the disadvantages of the plan.

"The Community Chest penalizes the strong and successful societies by interfering with their initiative and by capitalizing their good name and record of efficiency to the advantage of inefficient organizations, thus enabling these less worthy agencies to be financed and perpetuated through the standing and successful record of the strong and thoroughly tested organizations instead of requiring each to justify its right to exist by developing its own supporting constituency on the strength of service performed.

"Some Community Chests are becoming monopolies in the handling of public charity. They are heading in the direction of gigantic charity trusts. While in some cities the Chest is as yet a benevolent and only mildly autocratic trust, in others it is fast developing into a dominating and thoroughly autocratic body. This is particularly true in the large number of cities where the Chest is failing to raise the required amount. The acid test of its relationship to the participating agencies comes when the fund it raises is insufficient for the requirements. Fair weather does not test the staunchness of the ship.

"In several Chest cities representatives of important participating agencies complain that the executive committee of the Chest is rapidly becoming a super-governing body, determining the scope of the work of the agencies and increasingly exercising authority over them, treating as wards or dependents agencies which, through a successful history of many years, have efficiently and economically conducted their work. . . .

"The nation-wide promotion of the Community Chest plan seems to be very largely fostered by the American Committee for Community Organization, which is composed, to a very large extent, of Community Chest paid officials. . . .

"The Community Chest plan is virtually a violation of the fundamental principle of religious liberty in that it compels a donor to give to the support of agencies established and controlled by religious bodies with whose methods and aims he may not be in sympathy. The so-called privilege of 'designations of gifts' by means of which some Chest committees seek to meet this situation, is a delusion in that no matter what may be the aggregate amount of gifts which are designated for an agency, it gets only the amount allotted to it in the Chest budget. . . .

"The leading officer of an important participating agency in a Chest city in the West makes the following statement: 'With us the Chest has yet to make good. It has not altogether protected the giving public from "more than one solicitation during the year." It has not yet given the participating organizations 100 per cent of their actual allocations. It is undertaking, however, to do this by "juggling the calendar"—i. e., by shortening the year 1922 to nine months and starting the next Chest year October 1, 1922, instead of January 1, 1923. It does not take much of a mathematician to figure out that this adds 25 per cent to the amount the donor must give. With us the Chest has not reduced the cost of getting money, nor has it provided more money for the participating organizations.'

"Just as Municipal, State and Federal Govern-

ments, with the power which is behind them, can successfully get from the people large sums through taxation, so the Community Chest, where sufficiently backed by strong financial and other influential interests and where the assessment plan is rigidly employed, can, during its early history, get from the people incredibly large sums. As to whether, in the long run, this is a wise, safe and just plan for financing agencies organized and controlled by private bodies (which often are also sectarian) is a real question, particularly in view of the fact that no group of commercial or trade organizations in this or any other city, so far as we know, have adopted this method of pooling their financial resources."

The organized medical professions and the hospitals of California have not as yet either endorsed or condemned the "Chest Plan." Neither have they been consulted about it.

WHAT ARE "PRIVATE MEDICAL FEES"?

Recently there have appeared quite a number of articles which indicate that "private medical fees" are something definite and fixed. One recent article on the classification of patients in a "pay clinic" emphasizes the growing argument that patients should not be classified in accordance with income, but in accordance with their ability to pay "private medical rates."

Most of the articles and arguments constituting this propaganda are written by non-medical persons. Furthermore, they are written by persons whose past conduct shows them to be much interested in the socialization of medicine and who are themselves receiving compensation of one sort or another from socialized medical organizations.

Every true physician knows, and every well-informed layman ought to know before he writes on medical subjects, that there is no such thing as "private medical rates." He should appreciate the fact that most physicians have a more or less definite fee schedule for their work, but that the greatest part of their work is done at a figure well below this schedule.

This new movement by socialized medicine advocates suggests initial efforts to broaden the field which they can claim for patients of "pay clinics" and similar organizations. It ought not go unchallenged by the medical profession. Articles of this character are so unfair to the spirit of ethics and the practices of physicians that they ought to be resented and challenged by medical organizations everywhere. Physicians always have taken care of free work of their communities, and they always have met half-way the man who could pay something, but who could not pay the full cost of his medical service. There is nothing to indicate that the modern physician has changed in his altruism, except the propaganda of certain people, some of whom are paid salaries to promote the socialization of medicine. It is disheartening to the true physician to see in medical literature the wide admission of this kind of medical propaganda. That such a program can be carried out is but another evidence of the lack of adequate organization and co-operation among physicians themselves.

NEWSPAPERS AND PUBLIC HEALTH

More and more newspapers are devoting increasing space to matters pertaining to health. Some of their many difficulties in producing the right sort of information in their reading columns and greater cleanliness in their advertising columns is indicated by Lucy Salmon, professor of history in Vassar College:

"In the consideration of public health, the press is not so much divided against itself as it is divided with reference to the parts of the subject itself. The press has a free hand in some of its campaigns for public health—flies, rats, mosquitoes, and caterpillars are not commercialized, and campaigns against them are universally popular. But the press suffers a heavy handicap when it attempts to improve other conditions that militate against the health of the public. Efforts to secure pure milk may run counter to milk dealers and to the Grange; proposals to improve the water supply come into collision with the taxpayers; epidemics must not be reported because they reflect on the board of health and diminish out-of-town trade; news of the bubonic plague must be suppressed because its publication will interfere with travel; disgraceful living conditions in congested districts must be ignored because the tenement houses are the property of wealthy residents; the results of accidents must be minimized because they reflect on the railroads, or on important local manufacturing industries, or on the large department store; danger from fire in buildings where many persons are employed must not be dwelt upon because the owners are influential citizens; advertisements of patent cure-alls must not be rejected because they make widely known the home town where they are manufactured; a "clean-up week" must not be urged because it is opposed by the board of public works; exposure of filthy conditions behind the scenes in restaurants will result in boycotting the restaurants."

A REMARKABLE DAMAGE SUIT

The days when a physician's responsibilities were largely with his conscience and his God have passed. Once the patient accepted almost without question the opinions and service of the physician of his choice. Under these conditions, damage and malpractice suits were rare. In fact, laws and court decisions defining malpractice, and therefore the *legal* responsibilities of physicians, were not numerous nor drastic.

This situation is rapidly changing, and has already changed until the practice of medicine might properly be classed among the hazardous occupations. The hazards at the present time are in fact extraordinary, because of the irregularity of legislative enactments and the curious and, in some instances, weird decisions of courts.

Malpractice suits have become so frequent, based upon such a wide variety of allegations, that protective insurance is as much a necessary expense to the physician as is his office rent.

The fact that from 95 to 99 per cent of malpractice suits are without justification, as determined by court actions everywhere, does not in any

way prevent the constantly rising number of such suits. Some of these suits have a striking "news" value and always, whatever the charge and whether or not it is sustained, the physician suffers in what is far more precious to him than money. In instance after instance, the records show that the plaintiff's chief desire is to injure the physician's reputation, and he knows this can be done to a degree by bringing suit, regardless of the merits of the situation or the final court action.

Some spectacular charges are often made. One of these cases was recently tried in Paris, in which a patient actually sued a surgeon for saving his life. The patient was taken to a hospital suffering from severe internal pains. The surgeon undertook a minor operation, but found that he had to deal with a cancer and, therefore, performed a major operation, removing the cancer and at the same time depriving the patient of all hopes of motherhood.

The woman, with her husband, sued the hospital authorities for 35,000 francs damage and brought a separate suit against the surgeon on the ground that he had exceeded his authority and the agreement made with them, by performing the operation which, in the opinion of competent authority, had prolonged her life since that time. When it was pointed out that the necessity for the major operation was only revealed after the minor operation had been begun, the woman asserted that the surgeon should have arrested the operation and allowed her to recover from the anaesthetic so as to ask her consent, and she added: "This consent I would not have given," in spite of the fact that medical evidence had been produced to show that without the operation for cancer she would not have lived two years.

In rendering decision, the president of the court said: "By your own admission, Dr. —— has prolonged your life measurably beyond the period when you would have died. For this you sue him. On the other hand, had he done as you wish he would now be in a fair position to be sued by your heirs for causing your death through neglect. The appeal is not allowed."

ACKNOWLEDGMENT OF REPRINTS

Breed, Lorena M.—
See Rendall, Jean.

Bunnell, Sterling—
Surgery of the Gall-bladder. Reprinted from the California State Journal of Medicine, July-August, 1923.

Cole, William—
See Sutton, Irwin S.

Cordes, Frederick C.—
See Franklin, Walter Scott.

Franklin, Walter Scott, and Cordes, Frederick C.—
Lupus Vulgaris with Ocular Extension. Reprinted from the American Journal of Ophthalmology, July, 1923, Vol. VI, No. 7.

Mosher, Clelia Duel—
Some of the Causal Factors in the Increased Height of College Women. Third Note. Reprinted from the Journal of the American Medical Association, August 18, 1923, Vol. LXXXI, pp. 535-538.

Pottenger, F. M.—
Present Status of the Treatment of Tuberculosis. Reprinted from the Journal of the American Medical Association, August 26, 1922, Vol. LXXIX, pp. 728-732

The Circulatory System in Tuberculosis. Reprinted from the New York Medical Journal and Medical Record for May 2, 1923.

Rendal, Jean, and Breed, Lorena M.—
Some Observations on Results with Kidney-Function Tests. Reprinted from Annals of Clinical Medicine, Vol. II, No. 2, September, 1923.

Stanley, L. L.—
Blood Transfusion Apparatus. Reprinted from the American Medical Association, March 6, 1920, Vol. LXXIV.

Drug Addiction. Reprinted from Journal of Criminal Law and Criminology, Vol. X, No. 1, May, 1919.

Disease and Crime. Reprinted from Police Journal, November, 1922.

Nasal Refracture. Reprinted from the Laryngoscope, St. Louis Journal, 1917.

Nasal Refracture. Reprinted from Surgery, Gynecology and Obstetrics, December, 1918.

Narcotic Drugs and Crime. Reprinted from Report of Committee (G) of the Institute. Journal of Law and Criminology.

Spinal Anesthesia, Analysis of Two Hundred and Eighty Cases. Reprinted from the Journal of the American Medical Association, April 8, 1916, Vol. LXVI.

Spinal Anesthesia in Upper Abdominal Surgery. Reprinted from the California State Journal of Medicine, June, 1919.

Testicle Transplantation. Reprinted from the Journal of the American Medical Association, May 29, 1920, Vol. LXXIV.

Testicular Substance Implantation. Reprinted from Endocrinology. The Bulletin of the Association for the Study of Internal Secretions, November, 1921, Vol. V, No. 6.

Experiences in Testicular Transplantation. Reprinted from the California State Journal of Medicine, July, 1920.

An Analysis of One Thousand Testicular Substance Implantations. Reprinted from Endocrinology. The Bulletin of the Association for the Study of Internal Secretions, November, 1922, Vol. VI, No. 6.

Tuberculosis in California State Prisons. Reprinted from the Journal of Outdoor Life, Vol. XVI, No. 8, August, 1919.

Sutton, Irwin S., and Cole, William—
Report of a Case of Erythemia. Reprinted from the Journal of Laboratory and Clinical Medicine, St. Louis, Vol. VIII, No. 9, June, 1923.

Wegeforth, Harry M.—
Treatment of Snake Bite.

Wright, Harold W.—
Chronic Intestinal Amebiasis—Clinical Aspects with Special Reference to Neuropsychiatric Manifestations. Reprinted from the Archives of Neurology and Psychiatry, August, 1923, Vol. X.

Who Should Lead in Public Health—The leadership in matters pertaining to health should not be vested in non-medical sanitarians, sanitary engineers, philanthropists, or social workers, but in the physicians of the world working through their constituted organizations. They will develop future plans by conferring at definite times, with a view to strengthening old programs and devising new campaigns for promoting the health of the world and the freedom of mankind from the handicaps and penalties of preventable diseases.—(Editorial Comment, American Medicine, July, 1923.)

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by E. Spence De Puy, secretary)—The regular November meeting was devoted to a discussion of the Wassermann test from the clinician's point of view.

When is a four-plus Wassermann reaction a negative reaction? Are there grounds for complaint as to the Wassermann reports furnished the clinician? What is the matter? Why not better Wassermann? A suggested remedy.—Albert M. Meads.

Reports of Wassermann by five laboratories from split specimen. Statistical report of 183 Wassermanns done on split samples by five laboratories. Study of histories of non-checks with analysis of results, together with suggestions for standardization of the Wasserman reaction.—Gertrude Moore.

A plan for official approval of laboratories. Licensing of physicians on a showing of certain qualifications is a necessary protection of the people against the dangers of incompetent medical service. The physicians themselves possess no such safeguard in California against unskilled service, namely, in the diagnostic laboratories. A plan for remedying this deficiency that should be acceptable to both the physician and the laboratories.—W. H. Kellogg.

Clinical Interpretation of the Wassermann reaction.—Stewart Irwin.

Discussion by Dudley Smith, Albert Rowe, Quinton Gilbert, Harry Foster, W. S. Kuder.

W. W. Crane Jr. was issued a transfer card to Olmstead County, Minn.

The following physicians were elected to membership: Raymond St. Clair of Oakland transferred from Reno, Nev.; Edward Babcock of the Baby Hospital, Oakland; Philip S. Potter of Berkeley transferred from Onandoga County, New York; Arthur H. Orcutt of Berkeley.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary) — The regular monthly meeting was held at the residence of C. R. Blake on Cutting Boulevard, October 27, 1923, at 8 p. m. Regular business of the society was transacted, minutes of the previous meeting were read and approved. A committee was appointed by the president to confer with physicians and the County Hospital in regard to pay patients being treated gratis. The following members were appointed by the president: Campbell, Beard, Cook.

Walter M. Dickie, secretary of the State Board of Health, delivered the lecture of the evening, discussing the great strides made in preventive medicine, mainly due to the vigilance of the health departments, naming yellow fever, hookworm, Asiatic cholera, smallpox, malaria, bubonic plague, and many other diseases. The doctor discussed the necessity of whole-time health departments which all the members heartily favored.

The time of the annual meeting was discussed and it was decided to hold it on November 21, at Hotel Oakland, and after the business session adjourned to the Orpheum Theater for the remainder of the evening.

The following members were present, as well as the nurses of the county hospitals and health centers: Drs. U. S. Abbott, C. L. Abbott, Horne, Blake, Denninger, Keser, Beard, Vestal, Bumgarner, Carpenter, Hely, J. B. and Clara Spalding, Mr. Withington of the Boy Scouts, Dr. Campbell, Miss Wallace, Pittsburg school nurse; Miss Burley, Crockett school nurse.

Refreshments were served by Mrs. Blake.

LOS ANGELES COUNTY

Los Angeles County Medical Association—According to the Bulletin of the Los Angeles County Medical Association, November 15, 1923, the regular November meeting of the society was held November 15, and the following program was carried out:

The Discussion of Electrical Diagnosis and Therapeutic Methods from the Standpoint of the Neuro Society.—Thomas J. Orbison.

The Diagnosis and Indications for the Surgical Treatment of Gastric and Duodenal Ulcers.—C. P. Thomas.

Vagotonia.—A. Frisch.

Alhambra Hospital—According to the Los Angeles County Medical Association Bulletin of November 1, 1923, the Alhambra Hospital has taken the following action, as expressed in a letter to Harlan Shoemaker, secretary of the Los Angeles County Medical Association:

October 15, 1923.

Harlan Shoemaker, M. D.,
605 Marsh-Strong Bldg.,
Los Angeles, Calif.

Dear Doctor: At a meeting of the Board of Directors, October 10, a resolution was passed extending the use of the hospital only to physicians and surgeons who are eligible to membership in the American Medical Association. This action was taken as the result of a request from the hospital staff at a recent meeting. Very truly yours,

ALHAMBRA HOSPITAL,
H. L. Ingraham, Secretary.

MENDOCINO COUNTY

Mendocino County Medical Society (reported by Paul J. Bowman, secretary)—On November 8, physicians of Mendocino, Sonoma, and Lake Counties had a meeting at Cloverdale. The following officers for the year 1924 were elected from the physicians of Mendocino and Lake Counties: President, R. A. Babcock of Willits; vice-president, A. M. Craig, Lakeport; secretary and treasurer, P. J. Bowman, Fort Bragg.

Redwood Coast Hospital—The Fort Bragg Hospital has been reorganized and reincorporated under the name of the Redwood Coast Hospital, Inc. A number of improvements have been made in the hospital, including new equipment for orthopedic and fracture work.

ORANGE COUNTY

Orange County Medical Society (reported by S. A. Marsden, secretary)—At the October meeting of the Orange County Medical Society, Merrill W. Hollingsworth of Santa Ana presented a paper on "The Treatment of Diabetes by the Woodyatt Formula." His talk was illustrated with some specially prepared slides.

At the November meeting of the society, F. E. Coulter of Santa Ana read a paper on "Some Observations Upon the Relation of Syphilis and Nervous System."

S. A. Marsden of Santa Ana read a report of his observations at the obstetrical clinics of the Chicago Lying-in Hospital, Johns Hopkins, New York Lying-in, and Buffalo.

At the November meeting it was voted to change the date of election of officers from April to December with the annual banquet and installation of officers in January.

The following new men have been taken into the society recently: Thomas S. Blair, Santa Ana; R. C. Burkett, Santa Ana; Ralph E. Hawes, Huntington Beach.

William Cole, formerly of Anaheim, has transferred to the Harbor Branch of the Los Angeles County Medical Society, and is now located in Long Beach.

Another drive is on for the proposed Santa Ana

Valley Hospital. There have been two previous drives, but is expected to go over this time.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met November 6 at the San Bernardino County Hospital, with forty-five members present, thirty-two absent, five guests.

The program for the meeting consisted of an orthopedic clinic, conducted by Ellis Jones of Los Angeles. Cases were presented from the County Hospital service, the County Welfare Commission, and others.

The president, J. H. Evans, appointed the following board of councilors: C. F. Whitmer, J. S. Forsythe, C. G. Hilliard, F. H. Folkins, and H. G. Hill.

The secretary again requests that the names of those who are eligible to become members of the society be sent to him.

SAN DIEGO COUNTY

San Diego County Medical Notes (reported by Robert Pollock)—At the county society meeting of October 23, the following program was discussed: "Syphilis of the Stomach," paper read by E. J. Farrow, and discussed by Howard and Stealy. "Delayed Bowel Action," paper read by A. F. Willier, and discussed by Howard. "The Practice of Medicine: Its Success or Failure," paper read by F. A. Butler.

The San Diego County Medical Society today records 176 members in good standing who are entitled to vote at the annual election in December.

The construction work on the new St. Joseph's Hospital goes steadily on, and a few months will add this completed structure to San Diego's fine group of institutions.

A goodly number of our members motored to Los Angeles to attend the Southern California Medical Society which presented an excellent program November 2 and 3.

Thomas O. Burger has returned from the annual session of the American College of Surgeons at Chicago.

SAN FRANCISCO COUNTY

Proceedings of the San Francisco County Medical Society

During the month of October, 1923, the following meetings were held:

Tuesday, October 2—Committee on Medicine. Vis medicatrix naturae—W. F. McNutt, Sr. Effect of Roentgen-ray on bone-marrow—E. H. Falconer.

Tuesday, October 9—General Meeting. Presentation of portrait of N. J. Martinache, originator of the use of actual cautery in eye surgery—C. S. G. Nagel. Roentgen-ray therapy in thyrotoxocosis; its effect as judged by the basal metabolic rate—J. Marion Read.

Tuesday, October 16—Committee on Industrial Medicine. Bennett's operation for limited motion of the knee-joint. Technique and presentation of cases—G. J. McChesney. Presentation of two cases operated upon by Bennett—C. L. Hoag. Method of rating knee injuries—Mr. R. E. Haggard, Superintendent Permanent Disability Rating Department, Industrial Accident Commission.

Tuesday, October 23—Committee on Eye, Ear, Nose, and Throat. Melanosis of the conjunctiva—Louis C. Deane. Cataract extraction technique, with reference to antisepsis and iris anesthesia—P. Obarrio. Alveolar fistulae, with reference to the antrum—Merton J. Price.

Tuesday, October 30—Committee on Urology. Tuberculosis of the kidney during pregnancy—William E. Stevens. Papillomata involving the female urethra—H. A. R. Kreutzmann. Preliminary report of 112 consecutive supra-pubic prostatectomies, with no mortalities—George L. Eaton.

Synopsis of the Paper on "Mistakes in Surgery" (read before San Francisco County Medical Society, September 18, by A. S. Keenan)—Mistakes are common in every science, in every art, and in every business. It is not to be wondered at that mistakes should occur in surgery from the very nature of the work. The surgeon works with human lives, with flesh and blood, and cannot rehearse the act or correct the proofs or begin again.

The responsibility of a surgeon is very great, because of the material with which he works. The body is infinitely complex; infinitely precious.

The strain of practice is wearing, because of the responsibility of mistakes. Lack of care is accountable for more mistakes than lack of knowledge or lack of experience. Accidents happen, but they are frequently the offspring of carelessness. Surgery is a jealous mistress and requires, from those who serve her, undivided loyalty and attention.

The occasional operator is a public danger.

Mistakes are common in not promptly diagnosing and operating upon acute osteomyelitis. Fractures offer a prolific field for mistakes. A not uncommon mistake is trying to hold a fractured femur with plaster-splints.

Other mistakes are: Unnecessary and too long use of splints in properly reduced fractures. Delay in promptly diagnosing acute abdominal conditions. Not diagnosing and operating promptly upon acute cases of appendicitis. Too much surgery done in perforation of the stomach. Neglecting to operate promptly in cases of acute obstruction of bowels. Too much surgery in late operations of acute obstruction of bowels. Ectopic pregnancy diagnosed as acute infection following attempt at abortion. Ectopic pregnancy assimilating pelvic abscess and mistake in attempting to drain through cul de sac. Injuries to the bladder from neglect to catheterize patient. Packing with gauze after operation for fistula. Packing septic wounds.

Consultants often fall into the same errors as those they are consulting with because of mistake in getting at the facts from the patient.

The greatest mistake of all is the privilege given with every medical degree, which allows a new graduate the same privilege of doing any operation that any experienced surgeon has.

Proceedings of the Eye, Ear, Nose and Throat Section of the San Francisco County Medical Society, September 25, 1923, Edward F. Glaser, chairman (reported by F. C. Cordes, secretary)—Report of cases of marked visual defects in drivers of automobiles. For discussion tending toward proper legislation—Walter Scott Franklin opened the discussion on this subject. He hoped that discussion might be the starting point toward proper legislation which would insure the proper supervision of the eyesight of people driving automobiles as essential for the public safety. He cited several cases coming under his observation.

Dr. A., age 50, had a myopia of 16 diopters in the right eye, with 13 in the left. His correction gave him R. E. V. 0.3; L. E. V. 0.6. He drove his car, an open car, daily. His glasses were nose glasses, which might easily have been blown off by the wind and left him to drive his car with vision of fingers at a few feet.

Another case, Mr. R., age 45, had R. E. V. 0.3, L. E. prothesis. Examination of the right eye showed chronic simple glaucoma with constricted tubular field in his only eye. He drove his car daily. He was a real menace to every driver, yet bragged about his ability to drive even though his vision was so poor.

Mrs. Z., age 57, had R. E. V. with correction 0.3, L. E. V. with correction 0.4. The examination of her eyes showed bilateral incipient cataracts. She came complaining of difficulty in driving at night, due to the glare of approaching machines.

Mr. G., age 39, had a bilateral healed trachoma, pannus, with a marked refractive error that upon correction gave him R. E. V. 0.5; L. E. V. 0.6. He had been wearing nose glasses, and was driving a truck.

These cases are but a few types of the many seen by every oculist. They show clearly the necessity for visual examination in the operators of motor cars, particularly professional drivers. The requirements for locomotive engineers are very exacting, and yet in the operation of a machine, which is more difficult, no supervision is made of the physical qualifications of the driver.

Discussion—Mr. W. J. French, of the Industrial Accident Commission, said that the records of the California Industrial Accident Commission show that there were 9.328 permanent injuries reported during the five years 1917 to 1921, inclusive, and that, out of the total, 1223 were permanent eye injuries. For the same five years the statistics disclose 393,622 temporary injuries, and included in this large total were 41,162 temporary eye injuries. More regrettable than anything else is the fact that there were eighteen cases of total blindness reported during the five years, all charged to accidents sustained by employes.

It is impossible to find in the State records many cases of marked visual defects in drivers of automobiles, because of the difficulty of keeping classifications so refined in character, and also because eye injuries are usually sustained by men with good or fair eyesight. A search revealed seven reported cases of interest to this discussion. In four instances the men sustaining injuries to their eyes returned to their usual duties as chauffeurs and auto truck drivers. In two instances the records do not show whether the employes returned to work. In the remaining instance the right eye was injured, and the man was unable to resume his employment because he had previously sustained an injury to the left eye.

R. E. Simpson, engineer of the Travelers Insurance Company, in an address delivered on May 18, 1923, before the American Society of Safety Engineers in New York, estimated that between 25,000,000 and 30,000,000 workers in this country have subnormal vision. If these figures are nearly correct, the addition of other groups in the community and their proportions of defective eyesight would show a heavy majority of our citizens deficient in this important respect.

Poor vision and bad lighting are responsible for a too large percentage of accidents. There is no doubt of the wisdom of reasonable physical examinations, added to a need to require of automobile drivers some knowledge of the cars they operate before permanent licenses are issued.

Proper legislation to control the problem of marked visual defects in automobile drivers can only come as the result of careful planning. A conference of the representatives of different interested organizations could well be undertaken, so that the months before the meeting of the California Legislature in 1925 may be utilized in preparing proposed legislation that will, if enacted into law, mean fewer accidents and a reduction in the deaths and injuries sustained each year by our citizens.

Mr. George E. Sanford, general attorney California State Automobile Association, said that the problem of reducing the great number of accidents resulting from the operation of motor vehicles is increasing and becoming more difficult as time progresses.

It is true that mere lack of knowledge and carelessness can account for a greater per cent of collisions, but the presence of operators upon the highways who are suffering from mental or physical infirmities is also answerable for a great portion of them.

The only way this percentage can be minimized is by appropriate legislation. By this is meant sound and practical legislation which will accomplish results without working an unreasonable hardship and inconvenience upon the public.

There can be little doubt of the beneficial outcome of legislation which would, by a practical method, make it possible to segregate those who have such physical defects as glaucoma or tubular vision and extreme myopia or near-sightedness from the mass of drivers.

In California the new Motor Vehicle Act was handed down to the people with no requirement along this line. The law makes it discretionary for the suspension or revocation by the Division of Motor Vehicles of an operator's or chauffeur's license for reasons of incompetency to drive resulting from physical or mental infirmities. But this discretion is exercisable after complaints have been filed with the division against any one person. It is then often too late—damage has been suffered.

After a limited perspective into the laws of other States, we find a general expression of opinion from proper State authorities favoring legislation requiring a reasonable examination or method to be followed, for the purpose of determining whether a person is mentally and physically fit to operate a motor vehicle upon the highways before he is granted that privilege. I also am informed that upward of ten States now have such requirements upon their statute books. The State of Vermont requires that applicants have a thorough examination for physical defects, such as loss of an arm, foot, or poor eyesight. Great improvement has been found in the operating of automobiles since the law became effective two years ago. Rhode Island and several other States are at present considering the same matter.

Kaspar Pischel stated that in his opinion it is very timely to bring up this question before the society; that every effort should be made to secure legislation for the physical examination of automobile drivers. Such legislation must be liberal and reasonable. While anyone who wears glasses has a certain handicap, in fog or rain, for example, this handicap can be overcome by care. A person hard of hearing, or even a deaf person, may be a much safer driver than a reckless fellow with perfect sight and hearing, but without judgment and feeling of responsibility. A person with one eye only, while greatly handicapped, may overcome this handicap by greater care; but there are limitations. The requirements for a professional taxi or truck driver should be higher because he cannot always drive leisurely and take his time.

P. Obarrio pointed out that, even in a rigid examination, it is possible to overlook an important factor. An officer in the air service who had passed the rigid army tests and had been chosen for great hazards in the service had hemeralopia or night blindness, and had difficulty driving his machine at night. He also felt that bifocals were a definite handicap in driving.

Edmund Butler, city emergency surgeon, said that, while the vision is of great importance, the general driving ability, particularly the power to act in an emergency is of greater significance. He also learned from Captain Gleason of the Traffic Squad that among the various classes the drivers of Ford delivery trucks had the least accidents, while doctors ranked among those that had the greatest number of accidents.

Franklin in closing stated that a reasonable and practical examination is of the utmost importance. With this type of examination the most dangerous drivers would be eliminated.

St. Joseph's Hospital Notes: On November 14, St. Joseph's Hospital of San Francisco held its monthly meeting. The value of hospital and private case records was discussed by William Quinn, Philip King Brown, J. M. Stowell, and Roy Parkinson. Milton Alanson demonstrated the "Radiodor," a new vaporizer with marked advantages, an acquisition to the hospital.

In answer to the California State Medical Association, it was voted to extend physicians from outside of the city who are interested in post-graduate study the general courtesy of witnessing operations.

The staff program announced for December 12 includes "Hospital Notes of a Trip to the Northeast"—Ethan Smith. Progress of the Laboratories and X-Ray Department—W. T. Cummins and Lloyd Crow.

On November 7, the executive board of the staff gave a "welcome-home" luncheon to Ethan Smith, who had been away for six months.

The patronesses of St. Joseph's Hospital held their monthly meeting and a card game during Music Week, and decided to present the new nurses' home with a modern victrola. Funds for the latter will be raised by raffling at the December meeting a special five-pound box of candy, donated by Mrs. Walter J. O'Brien.

St. Luke's Hospital Clinic Club Meeting—St. Luke's Hospital Clinical Club met at luncheon in the doctors' dining-room for its regular meeting November 20. John M. Rehfisch addressed the club on the subject of "Biophysical Data in Deep Therapy." He traced the revolutionary changes which have occurred in physics as a result of the X-ray and its effect upon the atomic theory, and stated that as a result physicists were casting about for new theories upon which to base their work. He discussed the new instruments developed for measuring X-ray intensity and penetration and exhibited some of the newer forms of these instruments with lantern-slides of others.

The next meeting will be held December 4, the subject being, "Cardiac Neurosis," by E. S. Kilgore.

San Francisco doctors and out-of-town men interested in graduate work will be welcome at any of the Clinical Club meetings.

University of California Medical Society (reported by William J. Kerr, secretary)—The regular monthly meeting of the University of California Medical Society, held in Toland Hall, University Hospital, on Thursday evening, October 25, was well attended.

S. H. Hanson of the department of pediatrics presented a case of unusual anemia in a child of 15 months. The leukocytes varied between 3000 and 9000, with a preponderance of lymphocytes. The hemoglobin varied from 12 per cent on admission to 55 per cent at the time of the presentation of the case. The red count on admission was 928,000, and had later risen to 3,600,000. The reticulated cells had increased from 1 per cent to 5 per cent, the improvement in the blood condition following transfusions of whole blood in amounts of 50 to 75 cc. A diagnosis of aleukemic leukemia was given, and an unfavorable prognosis.

W. I. Terry and H. C. Shepardson, both of the department of surgery, spoke on the development of a technique for the use of the complement fixation test in a study of thyroid disease. They were able to show that thyroid substance from normal glands and adenoma of the thyroid was able to produce changes in inoculated animals, which caused a fixation of complement. It is possible that this technique may be of considerable value in a further study of thyroid conditions. By the method it may be shown that adenoma differs from normal thyroid and from the hyperplastic gland.

W. H. Kellogg of the department of preventive medicine spoke on the determination of susceptibility and immunity to diphtheria. He outlined a method whereby the immunity in a given individual or experimental animal could be determined by the use of a small amount of blood. The antibodies in the blood serum could be determined by injection into the skin of an experimental animal, using known amounts of diphtheria toxin to neutralize any antitoxin present in the serum. Kellogg suggested that this matter may be of value where it is not convenient, economical, or accurate to use the well-known Schick reaction. Kellogg felt that the pseudo-reactions seen in the ordinary Schick test could be eliminated by this technique.

The discussion of sinus infection and report of cases with suggestions for treatment—Arthur C. Gibson stated that surgeons were not all in agreement as to the character and extent of operative procedure in the treatment of these infections.

Sinus infection is an infection in or around the wall of the lateral sinus in its course from the torcula to the jugular bulb, most generally occurring in or near the mastoid cavity during the course of suppurated middle ear disease.

The important diagnostic features are: 1. Chilly sensation; 2. Irregular sudden rises of temperature, perhaps one or more times in twenty-four hours, and may be very fleeting in duration; 3. Increased W. B. C.; 4. Toxic appearance of patient and later symptoms are those of pyemia or septicemia.

The chief value of laboratory examination is to exclude other conditions. The treatment consists in ligation of the jugular vein in the neck and opening the sinus and removing the sinus wall until free bleeding is encountered. Early ligation is urged because of the comparative simplicity of the procedure and the slight risk as compared to the serious dangers which ensue in a case which is not ligated.

Discussion—Francis M. Shook of Oakland stated that the underlying principle was the removal of the infected area and drainage. In sinus thrombosis we formerly waited until all laboratory reports were in before operating. Even now some criticize early radical surgery. Early operation in appendicitis was formerly criticized with as little justification as is criticizing at the present time of early operation in sinus thrombosis.

Wallace Smith suggested that Gibson did not make his indications for operation sufficiently specific. If there is a definite thrombosis, ligation should be done. The indications have not been taken seriously enough, as we must be careful not to ligate needlessly. Chilly sensation is an early symptom in many conditions and, therefore, cannot be used for sinus thrombosis alone. The swelling in back of the mastoid is an unusual symptom of sinus thrombosis. The sewing of the upper end of the jugular into the skin to allow drainage is important.

Hebert stated that autopsy occasionally reveals an obliterated sinus indicating that the condition must have cleared spontaneously. Before ligation the indications must be definite and the blood culture is important when the temperature is high.

Gibson in closing stated that both jugulars can be ligated, so there need be no fear. He felt that opening the jugular was dangerous as it might infect the wound.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by H. S. Chapman, secretary)—The November meeting was held in the San Joaquin County Health Center. There were some thirty members present, this being the largest meeting held for some time. Members had the pleasure of inspecting the new health center and their new library, situated in this health center.

Edmund Butler of San Francisco read a paper on "Gastric Surgery."

John J. Sippy, executive head of the San Joaquin County health center, was admitted to membership in the county medical society.

The San Joaquin County health center has been functioning for six months. Baby clinics have been formed throughout the county and are being largely attended. A clinic was recently established in Stockton by the local health board.

County Health Center Endorsed by County Society—According to United States Public Health Service reports, the San Joaquin County Medical Society and the Central California District Dental

Society have endorsed the health center for the county now being constructed and operated under the direction of the county health officer.

We hope, in subsequent editions of the Journal, to be able to publish the policies, rules and regulations which define what medical work in San Joaquin County shall go to this health center and what shall be undertaken by the physicians of the county. This definition is usually different in each health center.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soperl Jr., secretary. The regular meeting held November 13, 1923, at the Cottage Hospital was called to order at 8:25 p. m., with President Means in the chair. Present: Seventeen members, three internes, W. H. Eaton, N. H. Blatherwick, Ph. D., and Mr. Vandervee, Superintendent of the County Hospital. Minutes of previous meeting read and approved.

First paper—"Unusual Complications of Acute Otitis Media," by Henry J. Profant, Santa Barbara, with lantern-slides and demonstrations of areas affected, on anatomical specimens. Patient exhibited to show recovery from paralysis of left external rectus oculis. Discussion, by H. J. Ullmann, N. H. Brush, and H. Koefod.

Second—"General Discussion of Sanitary Problems of the City," by W. H. Eaton, Captain Medical O. R. C., and City Health Officer. Discussion, by W. H. Mellinger, C. S. Stevens, A. Q. Spaulding, W. B. Cunnane, P. C. Means, C. D. Nagleman, and H. Freidell, centered mostly on the subject of proper education of youth, in hygiene, physiology, and anatomy, and the combination of the city and county health officers in one person.

Moved by Ullman, seconded by Mellinger, that the Santa Barbara County Medical Society request the Council of the city of Santa Barbara to supply the health department of the city with not less than four rooms, and that the suitability and location of these rooms meet with the approval of the City Health Officer. Passed unanimously.

Moved by Mellinger, seconded by Ullman, that a committee be appointed by the president of the society to investigate the status of the City Health Department, with a view to combining that department with the County Health Department if possible and practicable. Passed unanimously.

On invitation, Mr. Vanderveer briefly described the dairy at the General Hospital, and stated he believed he could meet all the specifications for "Guaranteed Grade A raw milk." This was corroborated by W. J. Mellinger.

Arnold G. Isaac was unanimously elected a member of the society. Moved by Stevens, seconded by Mellinger, that a list of delinquent medical accounts of people who are believed able to meet same be maintained at the secretary's office, to be accessible only to members of the society. Passed.

The secretary-treasurer introduced the subject of the disposition of the considerable funds of the society still in bank. The general sentiment was that these should be kept on hand for emergencies. Moved by W. D. Sansum, seconded by Hotchkiss, that the society pay for the screen-projection apparatus used at the hospital by and for the society. Passed unanimously.

William D. Varick, formerly of Manchester, N. H., has settled here for practice, and expects to join the County Society January 1, 1924.

R. Manning Clarke, formerly of this city, has removed to 319 Hollingsworth building, Los Angeles, where he will specialize in gastro-enterology and internal medicine.

Mary West Niles, who has practiced forty-one years in Canton, China, as a medical missionary, is visiting her brother, Rev. John S. Niles, at Goleta, a suburb of this city. She has had a wonderful experience in establishing schools for the blind and in teaching Christianity and medicine.

William H. Eaton, Captain Medical Officers' Reserve Corps, has accepted the position of City Health Officer of Santa Barbara, vice H. A. De Vilbiss, resigned. Eaton has had a wide experience in sanitation.

SOLANO COUNTY

Solano County Medical Society (reported by A. V. Doran, secretary)—The society held no meeting during the past month.

Ralph Allen has moved to Portland, Ore.,

C. Todd has moved to Concord, Calif.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The November meeting was a joint meeting with the physicians of Mendocino and Lake Counties, held at Cloverdale, November 8. Eighteen members were present from Sonoma County, eight from Mendocino, and two from Lake.

F. W. Lux of San Francisco delivered an address on "Influenza."

Peter Paul Baron of Geyserville and Demetrius Eugene Jeffry of Sebastopol were accepted as new members of the Sonoma society.

TULARE COUNTY

Medical Society of Tulare County (reported by Elmo R. Zumwalt, secretary)—On October 28, 1923, at Hotel Johnson, Visalia, the Tulare County Medical Society met at dinner, and later held the regular meeting. Twelve members were in attendance.

Following a few matters of routine business, the meeting was turned over to the speaker of the evening, Fred H. Kruse of San Francisco, who gave a most interesting paper on "The Diagnosis of the More Common Abdominal Disorders." His paper was illustrated by a series of X-ray pictures that were very interesting.

Clayton W. Locke of Lindsay died on September 26 of heart disease. Locke has been a member of the Tulare County Society for many years, and was an active practioner to the date of his death.

Papers for Medical Meetings—Short papers and sharp discussions should be the rule in the professional part of all medical meetings, not merely as a time-saving system, but as a necessity. It is rarely possible to keep the attention riveted on one topic any great length of time, unless it is one of extreme importance and is attractively presented in pleasing language. A revolutionary idea must, of course, be supported by detailed facts, and a discovery of new facts may be enlarged upon, but the average paper is likely to be a variation of some well-known idea which needs but little defense. The medical meeting is the place for the exchange of generalizations, experiences and conclusions. The time has long passed when scientific meetings were the only means of publishing the details of scientific work. Medical journalism fulfills this function, and to the great benefit of science, too; for the place where such data can be appreciated is in the quiet of the study rather than in the distraction of a crowd. Often do medical meetings become too tiresome for good thinking, and the recollection of them is a confused, painful jumble; whereas each member should have carried away new, sharply impressed ideas, as derived from short, crisp papers and the healthy discussion which followed. In this way it is possible to gather a crop of ideas which are never suggested by reading.—(Editorial, The Atlantic Medical Journal, October, 1923.)

SOUTHERN CALIFORNIA MEDICAL SOCIETY

Egerton Crispin, M. D., Secretary

The Southern California Medical Society held its sixty-ninth regular semi-annual meeting in Los Angeles on the 2d and 3d of November. All sessions of the meeting were well attended. The following scientific program was presented:

Edwin F. Chamberlain of San Diego read a paper on "The Importance of Early Diagnosis in Tumors of the Urinary Bladder." In this paper Chamberlain stated that tumors of the urinary bladder are either malignant or potentially malignant. Hematuria is one of the first symptoms, which indicates, a cystoscopy to determine the source of the trouble and its apparent nature. This paper was discussed by Leon Roth, Robert Day, Raymond Schultz of Los Angeles, and H. P. Newman of San Diego.

Holland G. Hambleton of Los Angeles, who has had a very large experience in the treatment of intestinal infections at the Ancon Hospital, presented his observations on "The Recognition and Treatment of Pathologic Amebiasis." The following points were brought out: The necessity of having a fresh, warm specimen to find motile amoeba. The differentiation of cyst-forms by the number of nuclei, and the forms taken by the chromatin in the nuclei. The treatment with emetin hypodermically and bismuth subnitrate in large doses by mouth with liquid diet, and rest in bed. This paper was freely discussed by Roy Hammack, John Merrill, and Paul Roen of Los Angeles.

The status of "Arterial Sympathectomy in Reynaud's Disease" was presented by Maurice Kahn of Los Angeles. Kahn's paper brought out a very free discussion by Fred Ray, Frank Pottenger, George Dock, James T. Percy, Joseph Swindt, H. D. Barnard, A. H. Zeiler of Los Angeles, and Frank J. Dingeman and M. C. Harding of San Diego.

"The Rationale and Technique of Surgical Treatment of Flat Feet" was the subject of Charles Lowman's paper, which was a lantern-slide presentation. The resumé of his paper included the following as the reasons for his procedure: When congenitally faulty, acquired flexible or rigid flat feet fail to improve after appropriate corrective treatment, operation indicated. When navicular low in childhood often becomes too large to allow forefoot to be adducted and pronated, especially if hooked type with os tibiale externum. Faulty pull of anterior tibia in front and short Achilles behind render correction by exercises impossible. Plantar ligaments must be shortened, pull of anterior tibia changed, Achilles lengthened, navicular bone replaced and permanently held. Lowman's paper was discussed by Reed, Gottlieb, O. O. Witheree, H. D. Barnard of Los Angeles, M. C. Harding of San Diego, and Captain Edgar Thompson, Medical Corps, United States Navy.

On Friday evening the first paper was by Carl Rand of Los Angeles on "Observations on Spinal Cord Tumors," with lantern-slides and case reports. The general discussion included all types of neoplasm occurring within the spinal canal. Symptomatology was considered from standpoint of location and extent of the growth in question. Pathology of tumors and variations of spinal fluid were taken up. Ten cases were presented with charts of clinical findings and microphotographs of specimens removed at operation. These included two sarcomas, three endotheliomas, one fibroma, one fibroangioma, one chondroma, one tuberculoma, and one carcinoma.

Herbert Evans, professor of anatomy, University of California Medical School, gave the results of his experimental work determining the "Hormone of the Anterior Hypophysis." Dr. Evans, as usual, when appearing before Southern California audiences, was very well received. Keen appreciation was expressed for the high quality of the scientific observations which he presented.

The Saturday morning session opened with a paper by Burnett Wright of Los Angeles on "Cystoscopy in Children" in which he said that modern urology is on so firm a basis that few adults are denied its benefits when needed. Improvements in technic and instruments have made it possible to apply these same principles to infants and children. Every surgical lesion of the kidney and ureter, and most of those elsewhere in the urinary tract of adults, may occur in children. Wright's paper was discussed by Anders, Peterson and Farmer of Los Angeles, and A. J. Thornton of San Diego.

The next paper was by A. H. Galvin of the Johnston-Wickett Clinic of Anaheim on "Some of the Causes and Methods of reatment of Backache." Galvin divides the causes of backache into two main groups—remote and direct. He emphasizes the value of a diagnosis by elimination rather than by election, and of routine Roentgen-ray examination in these cases. He gives the symptoms, treatment, and prognosis of each of the direct causes, and stresses the points of differentiation. This paper was discussed by Alfred Gallant, John Dunlop and Charles Lowman of Los Angeles, and H. P. Newman of San Diego.

John Bacon, chief surgeon of the Miami Inspiration Copper Co., Miami, Ariz., discussed "Some Phases of Industrial Surgery." His paper presented the claims of industrial surgery as a specialty, and made a plea for the establishment of hospitals especially planned and equipped for the care of industrial injuries, financed by groups of plants according to geographical location and supported by the hospital fees usually charged for compensation cases. Provision for families of workers at a moderate fee was included in the plan. Harlan Shoemaker and C. G. Toland of Los Angeles discussed this paper.

Nelson W. Janney of Los Angeles, with lantern-slides showed a series of "Orthopedic Deformities in Endocrine Diseases." He said that the development of the skeleton and ligaments is retarded in hypofunctional endocrinopathies. Adiposity is common. Muscle tonus is subnormal, due to hormone starvation and underexercise. Orthopedic deformities, especially flat feet and lordosis, are thus caused in endocrinopathies. Knock-knees, bow-legs, and spinal curvatures are less frequent. Orthodonital deformities due to endocrine disease have been the subject of a special paper by the writer. Treatment of orthopedic deformities in endocrinopathies should be twofold: (1) orthopedic (2) by endocrine extracts. The endocrine etiology of orthopedic deformities has not been emphasized nor duly recognized in the literature. Janney's paper was discussed by Clifford Wright and Edward N. Reed of Los Angeles, and H. Lisser of San Francisco.

The last paper of the morning session was by Guy Cochran of Los Angeles upon "Hypertrophic Pyloric Stenosis in Infants." In his discussion, Cochran said that pyloric stenosis in infants is a congenital disease, the pathology being a hyperplasia of the unstriped muscle of the pylorus. The symptoms are projectile vomiting, rapid exhaustion, visible peristalsis from left to right, constipation and presence of a tumor at the pylorus. The majority of unoperated cases die. During their care constant warmth and fluids are of utmost importance. Ether anesthesia is best. The Fredet-Rommsted operation is the one of choice. Of our fifty operated cases, sixteen died; the other sixty-eight are well. Our mortality is too high because these cases are not recognized, or are allowed to lose over 20 per cent of weight before operation, and are, therefore, desperate surgical risks. Cochran's paper was discussed by Edward Ruth of Hollywood, who took up the pathology of stenosis. Rexwald Brown of Santa Barbara and A. J. Thornton of San Diego took part in the discussion.

The Saturday afternoon session was opened by a

series of studies in the "Use of Insulin in Diabetes." Howard West of Los Angeles presented the first portion of the paper, which was a preliminary report on his respiratory studies and in which he said that indirect calorimetry is a valuable aid in studying the metabolism of diabetes and the effect of insulin. In the non-diabetic, insulin causes a rise in the respiratory quotient, indicating an increase in the per cent of calories derived from glucose with a simultaneous fall in the blood-sugar. The respiratory curve is similar to that following the ingestion of pure glucose. In the diabetic the effect of insulin is similar to that of the non-diabetic. The diabetic responds less readily to the ingestion of glucose, the respiratory quotient at times showing a tendency to fall. Acid bodies tend to appear in the urine when the molecular ratio of fatty acid to glucose exceeds 1.0.

The second portion of these studies were clinical phases, with results of personal observations by Bernard Smith of Los Angeles, in which he said that a maintenance diet may be considered to be one that will support a strength sufficient for the normal activity of the patient. Such a diet must be normally metabolized and must keep the patient in nitrogen balance. A glycosuria will develop if the diabetic diet greatly exceeds the caloric requirement of the patient, and a gradually increasing dosage of insulin will be needed to control the condition. Such a glycosuria may result even though the glucose value of the diet is within the tolerance limit. A glycosuria will frequently develop when the caloric value of the diet is well below the energy expenditure. Such a glycosuria will be associated with a marked excess in the nitrogen output. A study of the energy requirement of each diabetic patient is important, and it is only through such studies that the greatest good from insulin can be obtained.

H. Lisser of the University of California Medical School presented a lantern-slide clinic on "Types of Ductless Gland Diseases." Lisser's observations on these types of people with whom he has to deal were very well received and of great interest to an appreciative audience.

Elmer Belt of Los Angeles presented, with lantern slides, results of his "Experimental Work on Renal Circulation and Its Surgical Application," in which he said that the changes produced in the circulation of the kidney, following ligation of one of the larger renal arterial branches, are clearly portrayed by means of the celluloid injection method. An almost absolute ischaemia, confined to the region supplied by the blocked vessel, is followed by a late ingrowth of small anastomotic channels into the bloodless area. These increase in size, up to the fifth week when scar-tissue formation, resulting from the long period of ischaemia, again makes the area relatively avascular. The end-result is a depressed stillate scar equal in area to the region supplied by the ligated branch. The work is presented as a warning to those who might be tempted to ligate renal arterial branches in the course of operations on the kidney, and shows that restoration of function in such areas is impossible.

Frank Porter Miller of Los Angeles presented a series of studies upon the "Carbondioxide Combining Power of Blood Plasma in Pulmonary Tuberculosis." This paper was the result of blood chemical observations over a large series of patients with tuberculosis, covering a considerable period and containing interesting data in regard to the question of acidosis in tuberculosis.

On Saturday evening following an address by Robert Pollock of San Diego, the president of the society, in which he took up briefly the aims and purposes of the society, Robert Millikan, director of the Norman Bridge Laboratory of Physics, and chairman of the administrative council of the California Institute of Technology, gave the address of the evening. Millikan, in his clear and forceful way, discussed from a scientific standpoint the results of his observations on the so-called electronic method of treatment and diagnosis, which is more or less in vogue with a certain class of "doctors" at the present time. Following the results of his observations from a purely scientific standpoint, it was his opinion that a knowledge of high school physics would have permitted many of those persons using this method of treatment and diagnosis and many of the people employing such a method to realize that, from the standpoint of physical fact, it is pure nonsense. Following this, Millikan expressed the belief that the antidote lay in a better scientific foundation or knowledge for both the physician and the general public, and that this better fundamental knowledge would prevent many people, both so-called professional men and laity, from taking up procedures that were unsound in principle and had no basis in fact.

The following officers were elected for the coming year: President, Egerton Crispin, Los Angeles; first vice-president, Rexwald Brown, Santa Barbara; second vice-president, Allen Bramkamp, Banning; secretary-treasurer, Charles T. Sturgeon, Los Angeles.

The Yardstick of Success—Investigative work in medicine and the publication of the results thereof have come to be the yardstick by which the success of the individual and the excellence of the institution in which he works is measured. Medicine must progress or retrogress, for nature is a flux and there is no standstill, and that which does not go forward is left behind; it is one of the laws that bind us. Nevertheless, there are certain humanitarian laws which are imposed upon us as well, and a consideration of these should give us pause before we plunge ourselves too completely into an absorbed contemplation of science in vitro.

The unfortunate ones whose wounds must be dressed still demand an obligation of us; skill in the care of the sick must still be employed and should still be taught. It is worthy of comment that of a recent graduating class of a famous medical school only seventeen men were destined to enter general practice. The dearth of physicians able and willing to practice medicine in our rural communities is justly a matter of some concern. Is medicine and should medicine be a self-perpetuating science working in a general way only for the ultimate good of humanity in the abstract, or should one of its functions be to impart a little warmth and comfort to the sufferers at its door? It might be said that much flour is being milled, but few are being taught to make bread.

The Journal has long been of the opinion, and has before this expressed it, that the scientific achievements of the members of our medical faculties are worthy of great recognition, and it is glad that most of our medical schools have such individuals on their faculties. It is, however, also of the opinion that those rare men who, while capable of appreciating the advances of science, have also a knowledge of the roots and branches of disease, and an understanding of their fellow men in sickness and in health, and the quality of imparting some of their knowledge and of inspiring others to seek it are worthy of still greater recognition, for they are rare indeed and their value is not to be taken lightly.—(Editorial, Boston Medical and Surgical Journal, October 18, 1923.)

"State Medicine is Extravagant Medicine—Even a member of Parliament does not work for the State for nothing, and very few State workers will do more than they are obliged for their money—they get no thanks if they do. Not only must every worker be paid, but an army of paid administrators, inspectors and financial controllers must at once be super-imposed on the workers to see that they do their work and do not spend too much money."—Sir Richard Luce.

Nevada State Medical Association

HORACE J. BROWN, M. D., Reno.....President
CLAUDE E. PIERSALL, M. D., Reno...Secretary-Treas.
G. L. SERVOSS, M. D., Reno...Assoc. Editor for Nevada

ABSTRACT FROM NEVADA MEDICAL BULLETIN

(Editor, Horace J. Brown, 14 Thoma-Bigelow Building, Reno, Nevada)

October 15—One of the important actions taken at the recent annual meeting of the Nevada Medical Association was the raising of the dues to $7 per year, beginning with 1924, the extra $2 to be sent to the California Journal of Medicine so that our members will receive that publication. At the 1921 meeting, at Elko, the California Journal was adopted as our official organ, but no provision was made to send it to our members, and the action this year was to make such provision. The Journal will only be sent to each member when dues are paid; so, if you want to receive the January number, be sure to send in your dues before February 1. Those of our members who have already paid the $5 dues for 1924 will confer a great favor upon the secretary if they will send him the remaining $2 without his having to write to them about it. The California Journal is one of the best of the State Journals, and we are getting it for just half the regular subscription price. We will have a sample copy sent to each one of our members so you can see for yourself just what it is like. Those of our members who reside in California, and already receive the Journal as members of the California State Society, will not be required to pay the extra $2, as we can readily see where two copies of the same publication would be superfluous. Be sure to pay your dues early, so that we can start you off with the January number.

July 15, 1923 (re-quoted)—Your editor is associate editor, for Nevada, of the California State Journal of Medicine, which is our official Journal. We quote, in part, from a letter from Dr. Musgrave, who is the editor of that publication: "We would be glad to publish for you such news and information as you wish to have reach your members and other readers of our Journal. It will be the purpose of our Journal to treat the members of the N. S. M. A. exactly as we treat those of California, Utah, and other units for which the Journal is spokesman. We would be glad to have every month, before the fifteenth, the matter which you wish published the following month." "There is one form of advertising which ought to appeal to some of the doctors of your State, and that is our directory of physicians. These cards cost $30 a year or $20 for six months." "We hope with your co-operation to make our Journal, under its present name or some other name, a big feature in medical journalism." Now if you have any news items, and will send them in, we will be glad to forward them on for publication. Personal items, such as removals, marriages, deaths, births, etc., are acceptable as well as hospital news and public health matters. Papers that comply with the council rulings will be accepted for publication. If anyone desires to have a professional card printed in the Journal we would be glad to attend to that also.

George K. Magee, formerly of San Francisco, has located at Yerington and taken over the practice of the late Dr. Leavitt.

W. H. Brennen of Eureka has been appointed by the Governor a member of the State Board of Medical Examiners.

The State Board of Medical Examiners held their semi-annual meeting for the examination of applicants to practice in this State on November 5-7.

H. J. Brown of Reno has been appointed district surgeon for the Southern Pacific, vice W. H. Hood, who has been appointed consulting surgeon.

George McKenzie tendered his resignation as chief of staff of St. Mary's Hospital, but the resignation was not accepted, and he was requested to name some member of the staff to act for him during his illness.

MEDICAL ECONOMICS

Why not let our advertisers help you?

New Building of Burroughs Wellcome & Co.—The Journal is glad to carry in the advertising pages of this issue an announcement of the removal of this well-known firm's New York establishment to their new building at 9 and 11 East Forty-first street. This building, which is a modern steel-framed, fireproofed twelve-story structure, is of pure Gothic style, handsome and attractive in appearance and a conspicuous addition to the many notable buildings in its vicinity. Located opposite the Public Library, just off Fifth avenue, this new building is easily accessible from every quarter.

The firm's general offices for the United States of America, now installed in the new premises, adequately provide for the growing needs of the business. Suitable arrangements insure rapid communication between these offices and their New York works and laboratories.

A cordial invitation is extended to the medical profession by Messrs. Burroughs Wellcome & Co. to visit their new exhibition rooms at any time to inspect the display of fine chemicals, galenicals, and other products for which the firm has been so long and favorably known.

The researches and experimental investigations carried on so many years by the firm, through its laboratories and scientific departments, have led to the accumulation of a wealth of special and unique information, which is freely available at all times to medical men and scientific workers in general.

The work of Messrs. Burroughs Wellcome & Co. in connection with particular lines of investigation, such as the preparation of portable medical outfits, designed to save space for military, exploring, hunting and other expeditions, and withstand the trying climatic and atmospheric conditions, has developed a wide variety of equipment, which will always be found at the service of those interested.

Richter & Druhe have outgrown their old location and have moved to 641 Mission street, San Francisco. In their new headquarters they will be prepared to give their usual prompt and careful attention to anyone needing hospital and surgical supplies.

Wilmot Castle Company—Mr. Charles A. Mills, the representative in San Francisco of this well-known firm, has moved his offices to 1151 Market street. The advertisements carried by this company in our Journal give valuable information about the complete line of physicians', dental, hospital, and bacteriological sterilizers manufactured by Wilmot Castle, and they will be glad to have you write to them for their catalogues, or Mr. Mills will be ready to serve you at any time, if you will either telephone or write him.

Coupons—Many of our advertisers furnish coupons for your convenience in sending for information, catalogues, etc. Try using them—it will pay. All advertisers are prepared to give you information of value if you will correspond with them, and when you do be sure and mention this Journal.

BOOK REVIEWS

Excursions Into Surgical Subjects. By John B. Deaver and Stanley P. Reimann. 188 pages. Illustrated. Philadelphia and London: W. B. Saunders Company. 1923.

A book reminiscent not only to the reader's mind, but more or less subconsciously, perhaps, to the authors', of Sir Berkeley Moynihan's volume of addresses. It lacks Moynihan's originality and energy. It brings little that is new; it will soon lie forgotten and uncalled for in the corners of library shelves.

L. E.

Pulmonary Tuberculosis. By Maurice Fishberg. Third edition, revised and enlarged. Illustrated. Philadelphia and New York: Lea & Febiger. 1922.

The third edition of pulmonary tuberculosis by Fishberg is carefully arranged and cross-indexed so that it is of value as a reference book or for continuous reading. The author quotes freely from the views of investigators in this field, as well as giving his own ideas. Much controversy has arisen in regard to the effect of the epidemic influenza on the potential or early case of pulmonary tuberculosis. The author attaches small importance to the effect of this infection, but we have noted a number of cases where the epidemic type of influenza (and this should be differentiated from the sporadic case of mild or questionable grippe, called "flu" by many laymen and physicians) has started the active spread of tuberculosis. As the type of influenza was somewhat different in different localities, so it is quite possible that its effects on the tuberculosis may also have been different in different parts of the United States and world.

Two new chapters of real value have been added. One deals with the "Reciprocal Relations Between Pulmonary Tuberculosis and Certain Physiological and Pathological Processes" including physiological functions, extrathoracic tuberculous lesions, upper respiratory disease, non-tuberculous pulmonary infections, constitutional and metabolic diseases, gastro-intestinal pathology, cancer, and insanity. The other deals with the "Medico-legal and Insurance Aspects of Tuberculosis," and is of value because of the increasing interest of industrial and life insurance companies in the part played by tuberculosis in accident and disease, and the relationship of these to a co-existing tuberculous process.

The whole book has been rewritten, and includes many new illustrations.

P. H. P.

BOOKS RECEIVED

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. In eight octavo volumes, totaling 8000 pages with 1500 illustrations, and separate Desk Index volume free. Now ready—Volume I, containing 1240 pages with 284 illustrations; Volume II, containing 1025 pages with 180 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $10 per volume. Sold by subscription.

International Clinics, a Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc., and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, M. D., Philadelphia. Volume III, Thirty-third Series, 1923. Philadelphia and London: J. B. Lippincott Company, 1923.

Blood Chemistry Colorimetric Methods. For the General Practitioner, with Clinical Comments and Dietary Suggestions. By Willard J. Stone, M. D., Pasadena, California, Attending Physician, Los Angeles General Hospital. Introduction by George Dock, M. D., Pasadena, California. New York: Paul B. Hoeber, Inc., 1923.

Rhus Dermatitis. From Rhus Toxicodendron, Radicans and Diversiloba (Poison Ivy), Irs Pathology and Chemotherapy. By James B. McNair. The University of Chicago Press, Chicago, Illinois.

Physical Examination and Diagnostic Anatomy. By Charles B. Slade, M. D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third edition, thoroughly revised. 12mo of 179 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, $2 net.

A Text-book of Anatomy and Physiology. By Jesse F. Williams, M. D., Professor of Physical Education, Teachers College, Columbia University, New York City. 12mo of 523 pages, with 369 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $3 net.

Principles of Vital Statistics. By I. S. Falk, Ph. D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $2.50 net.

A Manual of the Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Eleventh edition, entirely reset. 12mo of 645 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $3.50 net.

A Primer for Diabetic Patients. Brief Outline of Diabetic Treatment, Including Directions for the Use of Insulin, Sample Menues, Recipes and Food Tables. By Russell M. Wilder, M. D., Mary A. Foley and Daisy Ellithorpe, Dietitians, the Mayo Clinic. Second edition, reset. 12mo of 119 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $1.50 net.

The Examination of Patients. By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $3.50 net.

Clinical Diagnosis. By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M. D., Professor of Clinical Pathology, University of Colorado. Fifth edition, enlarged and reset. Octavo of 762 pages, with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company. Cloth, $6 net.

Gynecology. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Third edition, thoroughly revised. Octavo volume of 936 pages, with 388 half-tone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $9 net.

Introduction to Medical Biometry and Vital Statistics. By Raymond Pearl, Ph. D., Professor of Biometry and Vital Statistics, Johns Hopkins University. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, $5 net.

Rubber and Guttapercha Injections, Subcutaneous Injections of Rubber and Guttapercha for raising the depressed nasal bridge and altering external contours. By Charles Conrad Miller, M. D., Oak Printing & Publishing Co., Chicago, 1923.

Who's Who in America, A Biographical Dictionary of Notable Living Men and Women of the United States. Volume XII, 1922-1923. Edited by Albert Nelson Marquis. Founded 1899, revised and reissued biennially. Chicago: A. N. Marquis & Company.

Habitual Constipation, Its Causes, Consequences, Prevention, and Rational Treatment. By Ismar Boas, M. D., Professor of Medicine in Berlin; translated by Thomas L. Stedman, M. D., Author of "A Practical Medical Dictionary." New York and London: Funk & Wagnalls Company, 1923.

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Obituary

HARRY WEIL EMERSON

(An Appreciation)

By Daniel C. Crosby, Oakland

No man lives to himself alone and every man's influence and service are needed among his fellows, in order that each may grow in all ways as he should. But the people of every community, be it city or country, level land or rugged mountainside, where they establish homes, require the specific and active ministrations of certain of their fellows.

This is true of all men, but it is of especial importance when we regard that entity which is now rapidly passing away—that institution which it has been an inspiration to know and a misfortune to lose—the family physician. He has in all modern times been an inseparable part of community life.

The older people of this city look back upon the life of many physicians in Oakland and its environs, whose names have now become tradition, and they feel that they are themselves alive or that they are better men or women for having known a Charles M. Fisher, a Frank Adams, or a George P. Reynolds.

In the lower end of this county there are still many who remember Selfridge; Buteau, the elder; and Allen. These men practiced medicine in and about Centerville when there were no automobiles, no telephones, no antitoxins, no clinical laboratories, and no trained nurses. These men were pioneers, loved for their indomitable energy and their never-failing patience and cheerful care of a whole countryside. My own recollection goes back only to Allen and Buteau, but what I have learned in the practice of medicine in twenty-five years increases vastly the respect I bear those men.

About thirty years ago there came to Centerville a young doctor who was a hail-fellow-well-met, had traveled pretty much over the country, and who was looking for a place to settle. The beauty of the Santa Clara Valley, the wholesome hospitality of its people, and the air of unpretentious prosperity of the district appealed to him and he decided to cast his fortunes there.

Graduated from Columbia College in New York City, Harry Weil Emerson knew all of the big men in medicine in New York, whose names—now become tradition—will never sink into the limbo of forgotten things as long as medical history endures.

He brought modern medical procedure—advanced for that day—resourcefulness, cheerfulness, limitless energy and sympathy with him when he came, and was soon well-established. Sayre, of blessed memory, who healed so many cripples, and by a strange irony of fate spent his last years as an arthritic, almost helplessly incapacitated, was responsible for his diagnosing a tubercular hip that had gone unrecognized and the long heavy metal splint which Emerson had made set the countryside agog, but saved the child.

The doctor prospered and achieved to the confidence and respect of the entire community; married Miss Stevenson, the eldest child of one of the earliest settlers and most substantial citizens; and became an integral part of the life of the community. With professional success came adequate financial reward, but the thing was true of him which is true of most physicians—much of the unknown record of his activities are found in "the sad and simple annals of the poor" in which every countryside abounds.

He continued his work long after his health began to fail, and the efforts of his faithful wife to protect him from calls at untimely hours aroused only his impatience, for the call of sickness had rung to him for so many years that his own failing strength did not deafen his listening ears to the calls of those who looked to him for help.

He remained in harness until he was stricken and his two faithful colleagues in the community came to his aid and rendered him tender, painstaking, faithful service, but his load was too great, his strength was sapped, and neither medicine nor nursing, nor the ardent wishes of an anxious community availed, and in a few days he was taken away.

The occasion of his funeral was marked by an almost complete suspension of business in the district. His late residence, the grounds about, and the street outside were crowded with people from all walks of life—whites and Orientals, Americans and Latins, young and old, prosperous citizens and rugged laborers, all gathered to show by their presence their state of mind with reference to a family physician gone to his reward.

Fundamentals in Bone Transplantation—The requirements regarded by Fred H. Albee, New York (Journal A. M. A., October 27, 1923), as fundamentals in this work are: The graft should be autogenous. The graft should be so placed and contacted that conditions are favorable to the early and sufficient establishment of blood supply. Within limits, the graft should be the internal fixation agent. The graft should, when possible, be so inserted that corresponding cambium layers come in close contact, and should consist of all four bone layers. The graft should be of such cross-section and strength that it will resist fracture during and after the period of external support until osteogenesis of sufficient amount occurs. The tibial inlay is regarded by Albee as being from every standpoint the ideal type of graft.

NEW MEMBERS

San Francisco—H. C. McClenahan, John E. Bohm, Jay Jacobs, Clarence G. Potter, G. A. Wislicenus, Francis T. Sheehy.
Santa Barbara—Arnold G. Isaac.
Geyserville—Peter Paul Baron.
Sebastopol—Demetrio E. Jeffry.
Bakersfield—Leland W. Ellis.
Santa Ana—Thomas S. Blair, R. C. Burkett.
Huntington Beach—Ralph E. Hawes.
Oakland—Raymond St. Clair, Edward Babcock.
Berkeley—Philip S. Potter, Arthur H. Orcutt.

DEATHS

Emerson, Harry W. Died at Centerville, October 21, 1923, age 60. Graduate of the College of Physicians and Surgeons, New York City, 1892. He was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

Grinnell, Fordyce. Died at Pasadena, October 5, 1923, age 79. Graduate of the Miami Medical College, Cincinnati, 1873. Licensed in California in 1885. He was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Lyon, Samuel B. Died at Los Angeles, November, 1923, age 64. Graduate of the University of Illinois College of Medicine, Chicago, 1894. Licensed in California in 1899. He was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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With an author-index of the California State Journal, it is easy to establish the bibliographical record of any of our members, and this will become exceedingly useful in the years to come.

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In commenting on Quackery and Causes for Its Growth, Matthias Nicoll, Jr., Deputy Commissioner of Health, New York State, says (New York State Journal of Medicine):

"From the medical standpoint a quack is any person who, as a means of livelihood and without the necessary knowledge of the structure and functions of the human body in health and disease, claims to be able by special methods to prevent, alleviate and cure pathologic conditions. . . .

"It makes little difference to the cause of public health under what title, however ludicrous, a practitioner chooses to carry on his profession, provided only that he be qualified by education, experience and personal character to recognize disease and apply those general principles of prevention and cure which have received scientific approval and stood the test of time and experience. It is very true that people love to be fooled and that in every day and generation there are many seekers after strange gods, but for the enormous growth of quackery which is taking place today there is one very definite and overwhelming cause: namely, the disappearance of the old-time family practitioner and the substitution of diagnosticians and specialists. . . .

"With the rapid disappearance of the family physician, his field has been invaded by a crew in motley, the clowns of the healing art, who with tongues in cheek wax fat on the credulity of their helpless victims. The quack is here. Licensed or unlicensed, he will conduct his business under ever-changing names until such time as the public is taught by health education and demonstration what medical science can and cannot do to alleviate their mental and physical ills; until physicians return again to the practice of the art of medicine and thus regain the faith of the mentally and physically sick and of that large class of persons who, for the need of a little sound advice, lead a life of misery; until specialization is restricted by boards of licensure to those who are actually qualified, and, furthermore, have given a certain period of years to the general practice of medicine; and, finally, until medical students are taught as a part of their regular curriculum the history of medicine, including the story of the rise and fall of quackery and the causes thereof, for only thus may the medical 'heir of all the ages' learn to know the work of his professional forebears, and it is hoped, profit by following their very many valuable methods of practice, which have been so nearly forgotten."

Public vs. Private Health Agencies—According to Senator Royal S. Copeland, M. D., in The Nation's Health of December, 1922: "The duty of protecting the public health is the particular business of governmental or official health agencies. When the exercise of this function is defective or neglected, the members of the community, individually or collectively, have a legal right and a moral obligation to ascertain the causes of such neglect, and to attempt to correct conditions. * * * *

"Any agency that assumes to conduct community health service which should properly be performed by an official health body, is guilty—though it may not be conscious of it—of an unsocial act, unless incompetence, indifference or poverty of a community government make it imperative for citizens to take up arms for their own protection. If officials will not or cannot perform functions which are properly theirs, it is not the business of private groups to supplant them, but to bend their efforts to the instruction or reform of such officials or to the procurement of moral and financial support to establish or strengthen the health organization of such official bodies. Private groups which seek to serve as substitutes for official agencies, do little except to produce demoralization and to delay the establishment of good and efficient government."

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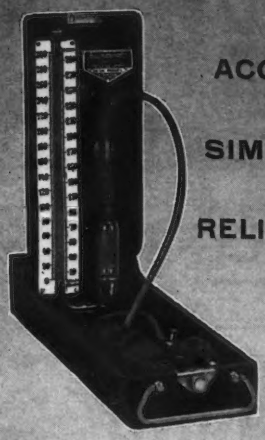

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How Can a State Medical Journal Best Serve Its Readers—Chas. J. Whalen of Chicago expresses himself feelingly in the Illinois Medical Journal on this subject and, after mentioning some of the points of desirable service for medical journals, says in part:

"And there are many more disclosures in line. Already the political traffic has begun in the "sacredness of maternity"—a move put over by the Sheppard-Towner Maternity Bill before five per cent of the doctors in this country knew what was happening, and it is safe to say that so far as some of the medical journals are concerned, there are not more than forty per cent of the doctors who know about it now. Just what the Sheppard-Towner Maternity act is going to mean before it gets through, is enough to appall anyone but a numbskull. Statistics about pregnancy will soon be as available as federal reports on boll weevil, the comparative efficiency of Rhode Island Red roosters and Black Langshan, and possibly as thorough as those on the wheat crop. Did the actual or real mothers of this country demand that nefarious piece of legislation? Did the physicians? No, to both of these questions. Then who did? A bunch of jobmakers and "welfarers" who were out hunting soft jobs for themselves and out founding a silk-lined medical nepotism. Yet, if you want to know the medical journals that fought or countenanced by not fighting this revolting piece of legislation, go out and find a few back numbers and learn the history of this outrageous treachery * * *"

Continuing on the subject of bureaucracy and its invasion of the field of medicine, he says:

"Generally speaking we may subdivide these origins of destructive attack into:

1. Overpaternalism, and
2. Bureaucracy as just mentioned.
3. Vesting of too much discretionary power in officials.
4. State medicine campaign.
5. Lay organizations and individuals uniting in attempts to supervise and control the practice of medicine.
6. Legislative Dictation of the Practice of Medicine.
7. Determination of Ignoramuses to nationalize physicians.
8. Compulsory Health Insurance beginnings.
9. The overtrained nurse."

Another field for active reform by medical journals in the interests of the profession is indicated by him as follows:

"* * * the outlook for medicine is, as stated by Dr. George E. Vincent, president of the Rockefeller Research Bureau. Even as far back as in 1919, in writing in the Charlotte Medical Journal this learned gentleman delivered himself of a prophecy anent the future of medicine that is enough to make a keen man's blood run cold * * *,—for, to quote Dr. Vincent: 'Medicine in its broad sense is to be simply one of the co-operating bureaus of government.' * * * he sees the members of the profession as having lost all personal initiative; he views physicians and surgeons working a specified number of hours daily at a governmentally fixed price and having absolutely nothing to say as to which patients they shall see and attend, and also the patient deprived of all choice as to which physician shall treat his troubles."

This is interesting in view of what has happened in Europe as a result of governmental control of the medical profession.

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What are Legitimate Medical Charities — In concluding an address before the Chicago Women's City Club, on "Legitimate Medical Charities," Edward H. Ochsner, said: "In conclusion, let me say three things. First, let us work for prevention rather than palliation. Second, those of us who are engaged in medical charity, let us give ourselves and the institutions with which we are connected the acid test every now and then, and let us not be a party to medical charity which pauperizes people and robs them of their self-respect and self-reliance.

"And, finally, practically every eleemosynary institution is in evidence of some fault in our social and economic system. t may be necessary now, but our supreme effort should be to make such institutions superfluous. Great is the nation that has no need of charitable institutions."—The Medical Standard, March, 1923.

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A Study of Light Waves in Their Relation to Rickets—Recent investigation has established the fact that white rats can be regularly protected against rickets by means of sunlight or artificial rays produced by the mercury vapor quartz or carbon arc lamp. Alfred F. Hess and Mildred Weinstock, New York (Journal A. M. A., March 10, 1923), have attempted a closer analysis of the spectrum in order to ascertain more precisely which waves exert this remarkable protective action. These experiments showed that in order to be of value in rickets, ultraviolet waves must have a wave length not longer than 302 or possibly 313 millimicrons. This renders light that has passed through ordinary window glass of no therapeutic value in this disorder. The experiments serve to emphasize the remarkable specificity of wave lengths of light in relation to rickets. Waves of 324 millimicrons in length have little or no value in protecting against rickets, and waves of 302 millimicrons are of great value in this respect. This signifies that a difference of about thirty millionths of a millimeter in wave length suffices to render ultraviolet light effective or ineffective. The experiments also indicate that the rays do not have to impinge directly on the surface of the skin. Clothing must be regarded as other filters which screen the effective rays; namely, according to their texture or thickness. Furthermore, a direct quantitative relationship exists between the nature of the material and the duration of exposure to sun's rays or artificial sources of light. Black clothing will absorb more of the effective ultraviolet rays than similar white material.

This phenomenon points to the need and the value of an analysis of rays employed in heliotherapy in rickets, tuberculosis and other diseases. It would seem to indicate that this valuable therapeutic agent will be used with the employment of filters to absorb radiations which may be not only ineffective, but also disturbing.

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The Full-Time Health Program—The minimum unit for a full-time county health department in California consists of a full-time physician as health officer; a public health nurse; a sanitary inspector, and an office clerk—all of whom shall devote full time to the duties of their office. A minimum of $10,000 per annum is required in the proposed county budgets. In most counties, it is proposed that the health officer shall have complete jurisdiction over all rural and urban territory within the county. With the development of the full-time health department idea, there is growing a spirit of community responsibility in the safeguarding of community health. The State is stimulating the cultivation of a spirit of local independence and is encouraing every local health department to stand upon its own feet. The State is advising, assisting, stimulating, and providing expert counsel in the encouragement of all local activities for the promotion of local public health. Modern conditions must be met with by the use of modern methods. The increased opportunity for the spread of contact diseases has grown tremendously since modern methods of transportation have done away with the isolation of remote communities. The opportunities for the spread of contact diseases are vastly greater today than they were ten years ago. With a full-time health officer, a public health nurse and a sanitary inspector, constituting a flying squadron, a large amount of preliminary epidemiological work can be accomplished before calling upon state or Federal health authorities for assistance. The development of full-time health units attracts a higher grade of public health official. There is no reason why an outbreak of the more common communicable diseases cannot be brought under control through the investigations and supervision of the local department. The State, under the ideal plan, should contribute only expert technical assistance that the local community is not able to provide.

No organization can possibly be stronger than its weakest link. California, Washington and Oregon are now engaged in forging strong chains in their public health organizations. With the natural advantages, such as have been enumerated, the possibilities for making life longer and happier on the Pacific Coast are very great. Public opinion is supporting the development of the idea with full cooperation; and there is every reason to believe that other states must look to their laurels if they are to compete with these young western states in the promotion of longer, happier lives for their people. —Walter Dickie, Weekly Bulletin, State Board of Health.

The Use of Vaccines in the Prevention and Treatment of Influenza and its Sequels—"When we come to consider the use of mixed vaccines, we find at once more valuable and more enthusiastic reports as regards their preventive value. A whole series of observers—Rosenow, Cadham, Eyre, and Low, Kraus and Kantor, Cary, and Minaker and Irvine—have apparently demonstrated a distinctly diminished incidence of infiffluenza in the vaccinated as compared with the unvaccinated, and the particular writers to whom I have referred have for the most part carefully controlled their cases by a group of unvaccinated individuals. Mixed vaccines have been used, not only preceding exposure to influenza, but also during the course of the disease in the hope of preventing its complications. There is a steadily growing body of information, some of it of apparently considerable critical value, that would seem to indicate that a mixed vaccine containing streptococcus and pneumococcus in addition to influenza bacilli will notably decrease the pneumonic complications of influenza. Cary, and Roberts and Cary, have not only prevented the occurrence of pneumonia by the use of a mixed vaccine, but have actually produced a rapid cure of pneumonia during its course."—Gay, Journal A. M. A., January 22, 1921.

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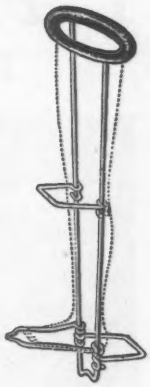

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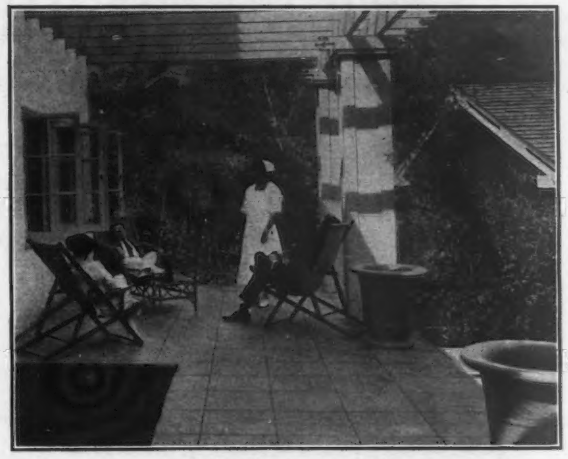

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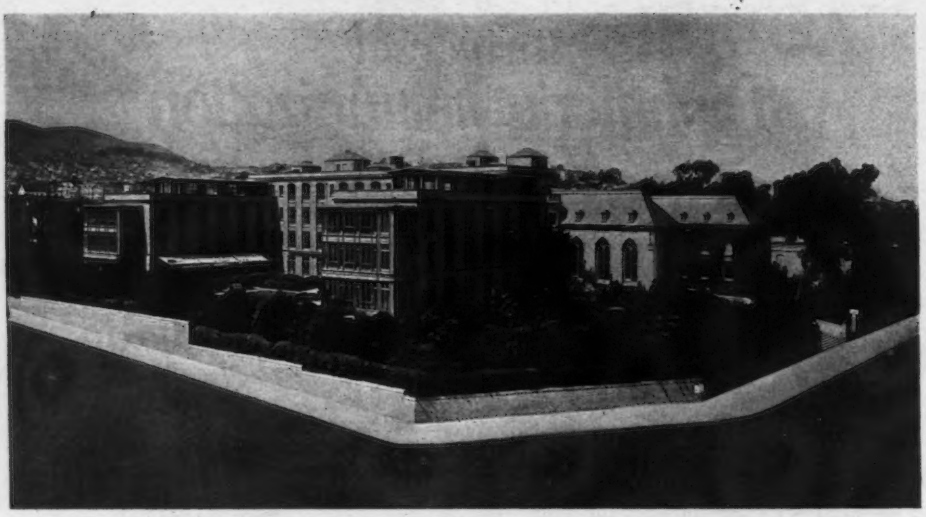

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The Commission is thoroughly equipped for the intensive study of patients suffering with thyroid dyscrasias. After correlation of its clinical and laboratory findings, the Commission's function will be to suggest in detail an individual course of therapy to be followed out under the direction of the referring physician or to personally undertake, with frequent metabolic controls, such a course on behalf of the referring physician. While clearly recognizing the surgical indications in thyroid conditions, it will be the policy of the Commission to regard surgical intervention as, in general, to be resorted to only after medical and radio-therapeutic measures have, in toxic cases, failed to control the toxemia.

Correspondence from physicians is solicited. Communications should be addressed to the Secretary of the Thyroid Commission, St. Luke's Hospital, San Francisco.

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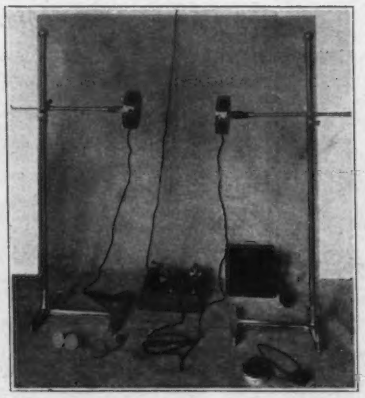

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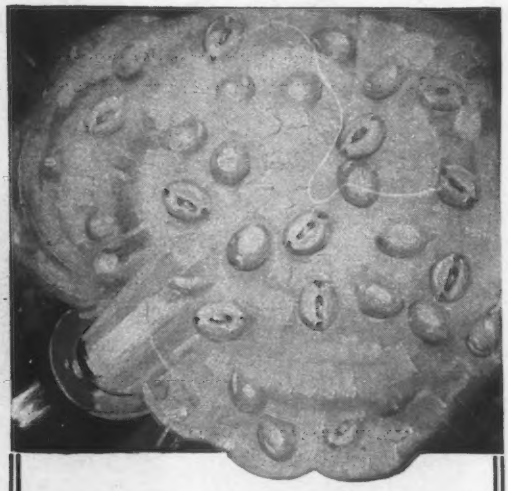
The Cytologic Diagnosis of Neoplasms—William Carpenter MacCarty, Rochester, Minn. (Journal A. M. A., August 18, 1923), shows the need for a new method of observation and a new method of applying a knowledge of morbid anatomy to the actual practice of medicine by means of three tables; one showing the percentage of incorrect pre-operative clinical diagnoses which average as high as 11.2 per cent; a second showing the percentage of cases in which clinicians avoid making a positive diagnosis, from 4 per cent to as high as 77 per cent, and the third showing the percentage of absolutely necessary microscopic diagnoses in a series of 12,964 specimens from 24,368 surgical operations, reaching as high as 95 per cent. MacCarty asserts that by oil lens studies of perfectly fresh living cells with or without Unna's polychrome methylene blue or vital stains, such diagnoses are being made by him almost daily, and checked clinically. A bit of tissue, immediately on removal, is placed on the stage of a freezing microtome, frozen, and cut from 5 to 15 microns thick. The section is then placed in physiologic sodium chlorid solution and unrolled. It is then dipped by means of a glass lifter into a strong solution of Unna's polychrome methylene blue from one to ten seconds, and then transferred to and washed in physiologic sodium chlorid solution, from which it is transferred to Brun's glucose, from which it is almost immediately drawn up on a slide and studied. When such a preparation is properly made, the only part of the regenerative and neoplastic cells which stains is the nucleolus. The differentiation between regenerative cells, partially or completely differentiated cells and the undifferentiated cells of malignant neoplasms may be made, provided the examiner is familiar with the high power morphology of normal adult cells of the differentiated tissues of the human body, and has a knowledge of the normal phases of differentiation in the normal regeneration of tissues.



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Can You Classify Yourself by This?—The fact is that the distinction between surgeon and physician is often too sharply drawn, both by the profession and the public; the two should be regarded as identical in the scientific foundation of their knowledge and in their viewpoint; divergence comes only in the application of a therapeutic method. Indeed, the physician who practices paracentesis of pleura, pericardium, neural canal, abdomen and joints; who compresses the diseased lungs by creating a pneumothorax, or divides intra-pleural adhesions, or aids diagnosis by injecting air into the peritoneal cavity, or bleeds his patient, or performs transfusion, or administers intravenous therapy, is using methods essentially surgical in their character; while, on the other hand, the surgeon constantly borrows from the practice of the physician. No human mind can have a working knowledge of the whole field of modern medical science, but the surgeon must be at least as familiar as the physician with the anatomy, pathology, and pathological physiology which underlie the conditions which he treats, and also with their clinical phenomena. Because of the exaction on his time and strength by the therapeutic method he employs, he cannot keep himself fully in touch with progress in purely medical fields, but even here the more he is able to do so the more effective he will be. The surgeon who stands by the operating-table, knife in hand, and says to the patient's physician, "Tell me what you wish me to do and I will do it," is not a surgeon, but merely a surgical technician; yet there are men who are willing to play this role, as well as physicians who encourage them to do so. The one is as truly a descendant of the barber surgeon as is the other the heir to the pompous, pedantic and complacent physician of the seventeenth century depicted by Moliere.—(David Cheever, Canadian Medical Association Journal.)

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Colfax, California

National Industrial Conference Board's Experts, Aided by Physicians, Compile Records in Thousands of Accident Cases — Industrial Conference Board, of 10 East Thirty-ninth street, New York, has just completed an exhaustive report on the medical phase of workmen's compensation acts in the United States. . . . . Records of thousands of personal injury awards have been studied by the medical authorities in reaching their conclusions and some surprising facts were brought out by the inquiry. Identical injuries are compensable in widely varying amounts in various States, and there is a similar inequality in the courts' interpretation of identical sections of the various laws. What is needed most in the administration of the workmen's compensation laws, in the opinion of the board's experts, is greater consideration of the opinion of medical men in the administration of the laws and more uniform opinions among those concerned with their administration. . . . The only States which have no workmen's compensation laws are Arkansas, Florida, Mississippi, Missouri and North and South Carolina. . . . There is an increasing tendency to give due consideration to the value of adequate medical treatment in the administration of the laws. Early in their administration, the doctor's part received scant attention. In some States, even for the most serious injuries, only two weeks' medical treatment could be legally provided. "A period of experience has now elapsed," says the report, "sufficient to enable those who make the laws and those who administer them to obtain a better view of the problem. Such experience has shown the advisability of greatly increasing both the time and amount of medical service rendered, until at this time in twenty States such service may be unlimited." . . . The term "medical service" receives widely different interpretations in various States. Ohio and Connecticut have freed employers from liability when injured workmen took their troubles to quacks, masseuses and "doctors of medical electricity." Similarly the California State Commission refused to reimburse a worker who consulted a Chinese herb doctor. Iowa and Connecticut do not regard osteopaths as qualified to act in compensation cases, while California permits them. In Wisconsin, Christian Science treatment may be resorted to by an injured worker with his employer's consent. There a death from a bruised shinbone infection which was treated by prayer was held compensable. However, a Boston elevated railway employe who presented a $14 bill for services by a Christian Science practitioner lost his claim.

One result of many of the laws has been to break down the universally accepted principle of privileged communication between doctor and patient. In many States physicians can be compelled to testify as to their treatment. . . . Various State courts and commissions have answered in various ways the question: "What is the human body worth?" For example, a thumb is worth $225 in Wyoming, $600 in Oregon, and in New York and Alabama the legal compensation for sixty weeks. Wyoming holds a human hand worth $1000, while its value rises to $1600 in Washington, $1900 in Oregon and 244 weeks' compensation in New York, and it is worth 104 weeks' compensation in Colorado. Similar variations in legal value occur with reference to the loss of an eye, a toe, a foot and fingers. New York holds that when a worker is injured so that only his good looks are impaired, he may collect from his employer owing to the humiliation entailed. In New York and Michigan compensation was awarded when horses bit off ears of workers, but in New York the award was based on the common law. One worker collected in New York because he was unable to replace his lost eye with one of glass, and a drooping eyelid which made the injured person appear to be winking at whatever he observed resulted in another award. Another New York workman, whose nose was bitten off by a horse, reecived $2500 from the compensation board.

Deafness has been valued at $3000 in Oklahoma, and deafness in one ear at $1500. In Washington loss of hearing is only compensable at $1900 and of one ear's deafness at $500. . . .

Persons bitten by insects, when spotted fever has resulted, are not entitled to damages, in the opinion of the Idaho Industrial Accident Board. However, New Jersey authorities held that a chef pinched by a lobster was entitled to five weeks' disability award for infection. In California, on the other hand, a farm hand bitten on a leg by a spider failed to get damages. The same commission, however, reversed this ruling in the case of a sailor whom a spider bit, holding that spiders had no business aboard ship and that a ship's owner was liable. Poison ivy injuries have been held compensable in New York and Massachusetts, but a municipal laborer in San Francisco was denied an award for poison oak injuries. . . .

One of the most important phases of the report is that which shows the widely varying amounts expended for medical treatment under the awards of various States. For instance, Wyoming in one year allowed only 3.6 per cent of the total awards for medical expense, while the percentage in Connecticut was 38.2, totaling $1,663,107.08, and in Massachusetts, where industrialism has reached one of the highest points of development, the percentage was 20.8, with medical expenses of $1,602,057.74. In only one State, New Mexico, is there a provision for the physical examination of workers before an injury occurs.

The Use of Basic Diets in the Treatment of Nephritis—It seems logical to W. D. Sansum, N. R. Blatherwick and Florence H. Smith, Santa Barbara, Calif. (Journal A. M. A., September 15, 1923), in selecting an optimal, arterial hypertension-nephritic diet, to pay especial attention to the acid-base balance of the food selected. At the same time, other fundamental dietary principles should not be neglected. The same types of diet are used by the authors in the treatment of all forms of nephritis, but they relate here their experience with the arterial-hypertension nephritic group. Such patients were not kept in bed, but were permitted their usual activities. They were not starved. An attempt was made to maintain them at as close to their normal weight as possible. They were given no exhaustive hydrotherapy. They were given no vasodilator drugs. Cathartics were not used, since the bulk insured from one to three natural stools a day. Fluids were not limited. Sodium chlorid was restricted in a few terminal cases when the kidney function was very low. Patients were kept in the hospital from one to two weeks, where a series of palatable, sample meals were served and where they were given careful diet instructions. This hospitalization provided an opportunity for the study of continuous twenty-four-hour specimens of urine to ascertain whether the diets were sufficiently basic. The neutral foods may be used in the amounts desired by the patient, unless otherwise stated. They are: butter, cornstarch, cream, lard, sugar and tapioca. Many of the acid-producing foods should not be used. A few of the less acid ones may be used in specified amounts. In general, all vegetables, nuts, fruits and sweet milk, with the exception of prunes, plums and cranberries, are basic in their final reaction. These may be used in the amounts desired by the patient. The total excess of base over acid is expressed in terms of cubic centimeters of a normal solution. The patient readily understands when he is told that the urine acidity should not be greater than two times that of the body. If the urine is as much as 100 times as acid as the body he easily understands the need for more basic food.

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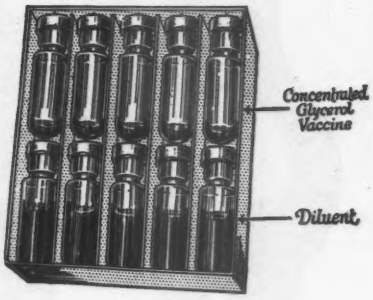

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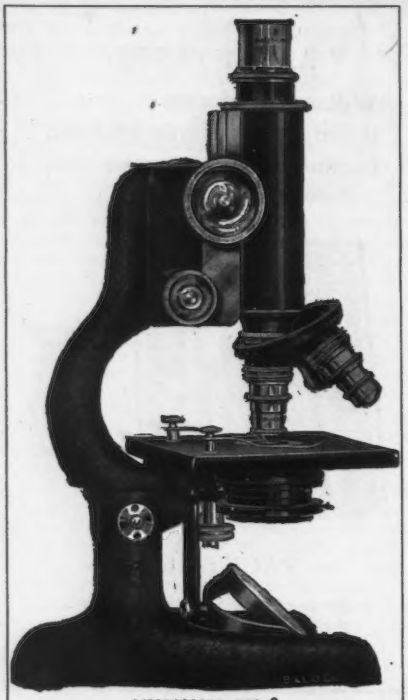

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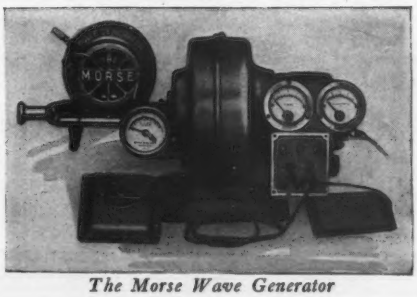

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In the early days of serum therapy the standardization of antitoxin was a haphazard proposition, and even the tests utilized for safeguarding its purity left much to be desired. All that is a thing of the past. The standardization of antitoxin is now a definite and accurately controlled procedure, so that its potency, as expressed in antitoxic units, is a certain guide to the physician in determining dosage. Thoroughly dependable tests for insuring the freedom of the product from bacterial contamination or toxic substances of whatever nature have also been developed.

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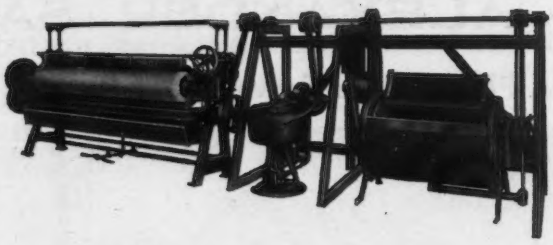

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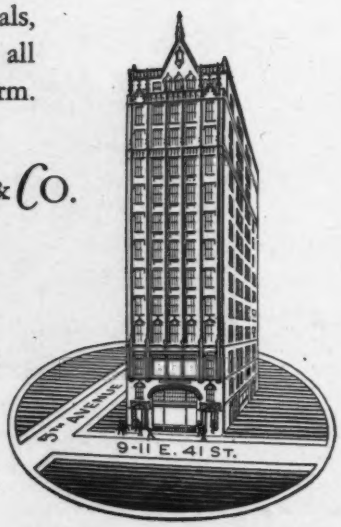

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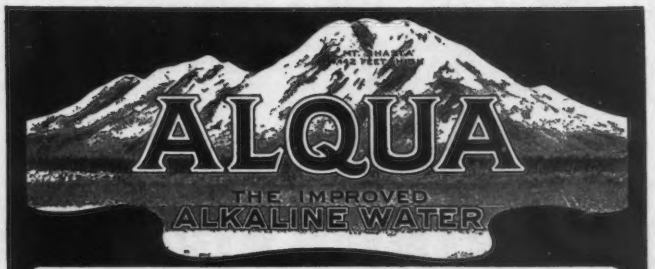

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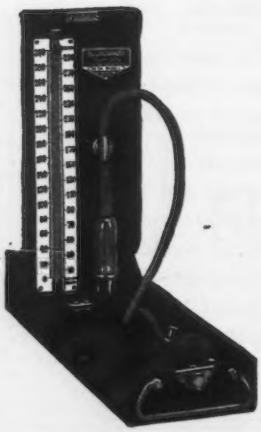

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Cinchona Derivatives in the Treatment of Heart Disorders—K. F. Wenckebach, Vienna, Austria (Journal A. M. A., August 11, 1923), states that his objection to quinin in heart disease was that it had been shown by Stantesson and by Stokvis to be a heart-paralyzing drug, but clinical experience disproved this laboratory finding. Wenckebach points out that one can never tell from the pharmacologic action of the drug how it will work at the bedside; for instance, we should never forget that the action of digitalis also on the heart is mainly and primarily a depressing action on the functions of heart muscles, at least as far as its vagus action is concerned, and still digitalis is the most powerful and most brilliant of all heart drugs. Physicians should not avoid giving drugs that have been found to be useful at the bedside on account of theoretical arguments only. The first arrhythmia in which Wenckebach had complete success with small doses of quinin (from 0.3 to 0.4 gm.) was extrasystole. The man had a very serious insufficiency of the aortic valves. His heart was in a very bad condition, and he knew that he had only a short time to live. He bore his condition very well, but there was one thing which made life unendurable to him, namely, periods of extrasystole. The extraordinarily strong pulse wave, following the compensatory pause of the extrasystole, made him feel so utterly miserable that he asked energetically for relief. Wenckebach gave him strychnin. In doses of from 2 to 3 mg. daily, this drug helped him as soon as extrasystole came on, and the favorable effect was not lost until the end. Strychnin in these small doses is helpful in cases of extrasystole in otherwise normal as well as in diseased hearts, but very often it does not act strongly enough, or it loses its action very soon. In these cases he tried the combination of quinin and strychnin and found that this form of treatment was completely successful in the great majority of cases. Wenckebach gives from 0.3 to 0.4 gm. of quinin daily, plus 2 or 3 mg. of strychnin through periods of ten days. It has also proved useful, to some extent, in the different forms of paroxysmal tachycardia, and in cases of marked so-called sinus arrhythmia starting in the normal pace-maker itself. In those forms of tachycardia, especially, found so frequently in adolescence, in nervous, rapidly grown-up young people, quinin, especially in combination with strychnin with its marked vasomotor influence, may be of great help. The combination of quinin and strychnin stabilizes the heart action quickly.

Summarizing his own experience and the work done by others, Wenckebach says that quinin has its greatest success in those cases in which there is not much wrong with the heart, in which fibrillation has been present for not too long a time or is showing itself in attacks as a special form of paroxysmal tachycardia. When auricular fibrillation is the only abnormal phenomenon of the heart, the disappearance of this disagreeable form of disturbance of the heart mechanism may be a complete cure, freeing the patient not only from his subjective symptoms, but at the same time from the suspicion of having a myocarditis, or, at least, of some bad condition of the heart muscles. On the other hand, in cases in which fibrillation is only a part of the morbid condition, when valvular disease or pathologic changes in the heart muscles are the chief features of the disease, the abolishing of fibrillation will give only partial relief. In such cases all cinchona derivatives are depressing drugs and should not be given in too large quantities.

Generally speaking, real heart failure asks for digitalis, and it may be necessary to avoid quinidin until the condition of the heart is much better. To avoid an unfavorable effect of quinidin, one should try to find out whether auricular fibrillation plays an important role in the development of the disturbance of the circulation.

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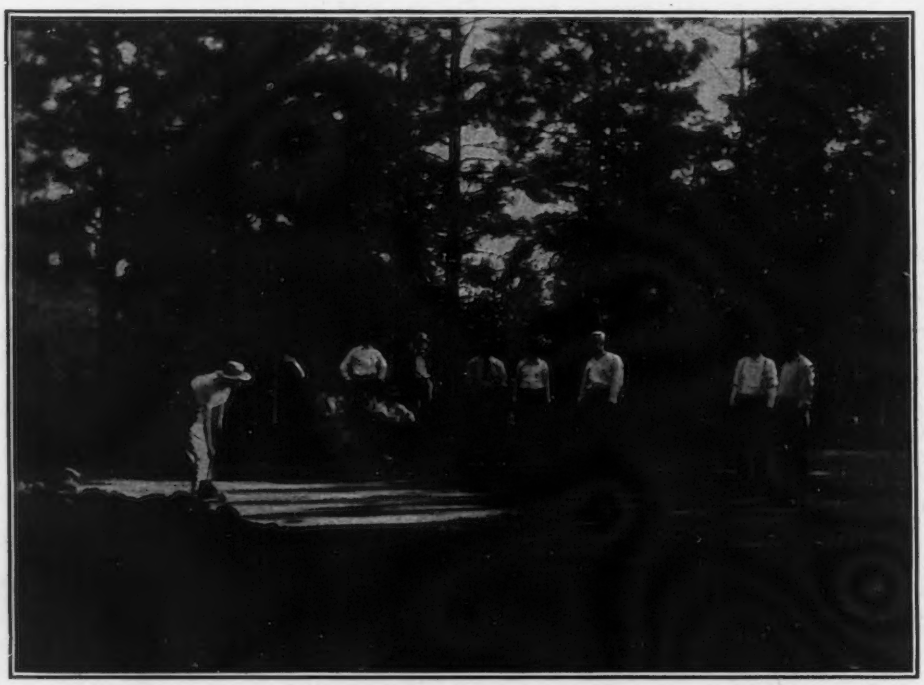

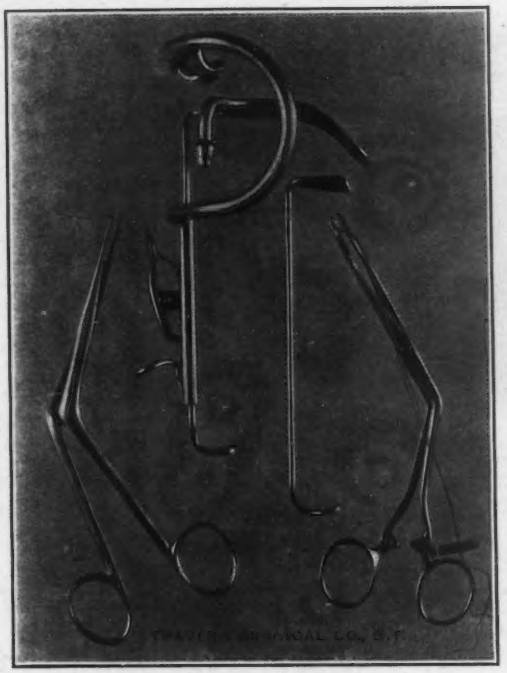

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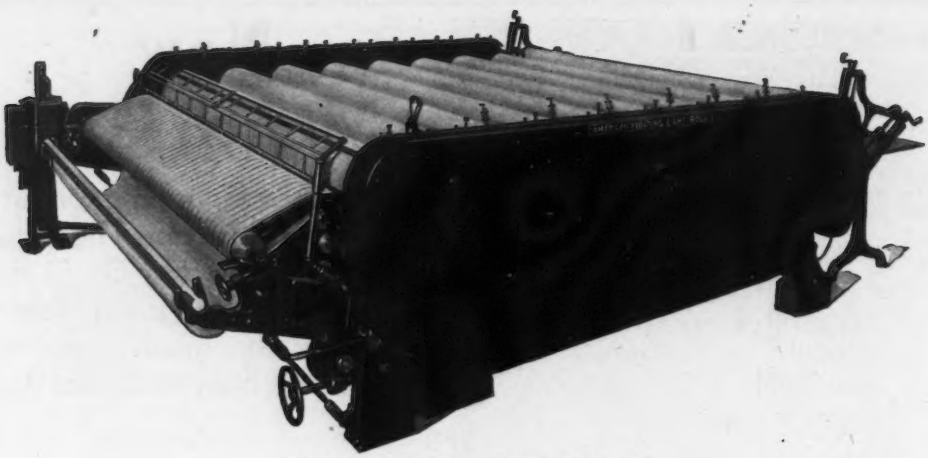

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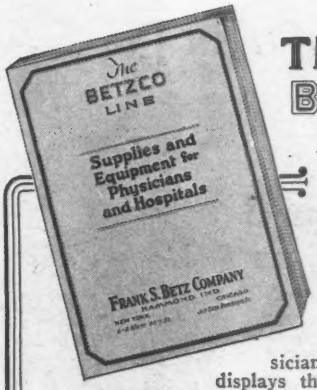

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(Reported by Council on Pharmacy and Chemistry of the A. M. A.)

The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act: Fisher's Uterine Tonic (Fisheropathic College Association), containing ammonia, traces of ammonium salts, including iodid and carbonate, vegetable extractives, glycerin and water. Fisher's Kidney Food (Fisheropathic College Association), containing a small quantity of vegetable extractives, citric acid, sugar, alcohol and water. San-Yak (Burnham Medical Co.), composed essentially of alcohol 7.0 per cent, plant extracts, including cinchona and a laxative drug, 2.4 per cent, and water 92.0 per cent. Plough's Prescription C-2223 (Plough Chemical Co.), consisting essentially of potassium iodid, extracts of plant drugs, including colchicum, a trace of salicylic acid, glycerin, alcohol and anise flavoring. Chicawampa Tea (Chicawampa Tea Co.), consisting essentially of cut herbs, principally the Epheedra nevadensis (known locally as "Caynote" or "Canutlio"), with small proportions of peppermint and sage. (Journal A. M. A., October 20, 1923, p. 1380.)

Van Ess—The Van Ess Laboratories, Inc., Chicago, put out "Van Ess Special Dandruff Massage" and "Van Ess Liquid Scalp Massage." "Van Ess" is sold with the claims that it will make hair grow and that it will stop falling hair in two weeks. The A. M. A. Chemical Laboratory reports that Van Ess Special Dandruff Massage is a perfumed liquid which separates into two layers on standing. The upper layer consists essentially of a petroleum oil which appears to be kerosene. The lower layer appears to be composed of water and alcohol containing small amounts of quinin sulphate, coloring matter and perfume. The laboratory concludes that it is probable that a mixture of 35 parts of kerosene, 15 parts of alcohol denatured by the addition of 2 grains of quinin sulphate per fluid ounce, and 50 parts of water would have whatever therapeutic properties the Van Ess Special Dandruff Massage possesses. (Journal A. M. A., October 27, 1923, p. 1461.)

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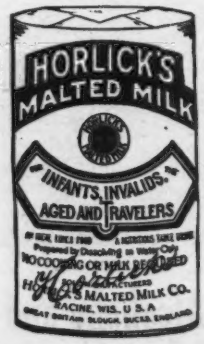

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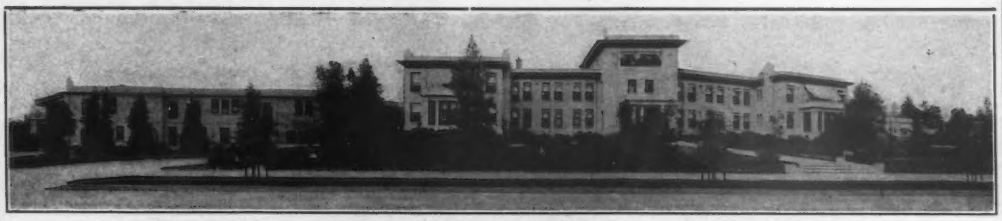

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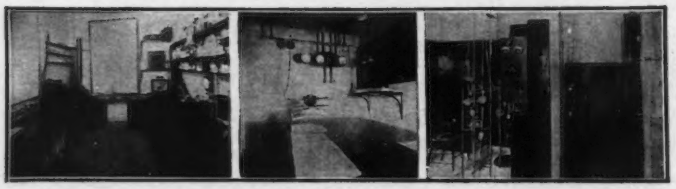

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(Accepted by the Council on Pharmacy and Chemistry of the A. M. A. since September 29, 1923)

Lederle Antitoxin Laboratories—Diphtheria Toxin Antitoxin Mixture (0.1 L+) (Lederle), 30 cc. vials (New and Non-official Remedies, 1923, p. 284).

Parke, Davis & Co.—Antidysenteric Serum (P. D. & Co.); Protein Extracts Diagnostic (P. D. & Co.): Colon Bacillus Protein Extract Diagnostic (P. D. & Co.); Gonococcus Protein Extract Diagnostic (P. D. & Co.); Micrococcus Catarrhalis Protein Extract Diagnostic (P. D. & Co.); Pneumococcus, Type I, Protein Extract Diagnostic (P. D. & Co.); Pneumococcus, Type II, Protein Extract Diagnostic (P. D. & Co.); Pneumococcus, Type III, Protein Extract Diagnostic (P. D. & Co.); Pseudodiphtheria Bacillus Protein Extract Diagnostic (P. D. & Co.); Staphylococcus Albus Protein Extract Diagnostic (P. D. & Co.); Staphylococcus Aureus Protein Extract Diagnostic (P. D. & Co.); Staphylococcus Citreus Protein Extract Diagnostic (P. D. & Co.); Typhoid Bacillus Protein Extract Diagnostic (P. D. & Co.). Silver Nitrate in Capsules (P. D. & Co.).

New Tuberculin B. E. Dried—To obtain this product, tubercle bacilli are dried, ground for several months in a ball mill, the finely disintegrated bacillary bodies are mixed with a suitable base and made into tablets. Each tablet represents a definite amount of New Tuberculin B. E. Dried.

Tablets Tuberculin B. E. (P. D. & Co.)—New Tuberculin B. E. Dried, marketed in vials No. 1 of ten tablets, each tablet containing 0.0001 mg.; in vials No. 2 of ten tablets, each tablet containing 0.001 mg.; in vials No. 3 of ten tablets, each tablet containing 0.01 mg.; in vials No. 4 of ten tablets, each tablet containing 0.1 mg.; in vials No. 5 of ten tablets, each tablet containing 1 mg.; also marketed in packages of five vials, Nos. 1, 2, 3, 4 and 5, inclusive. Parke, Davis & Co., Detroit.

New Tuberculin T. R. Dried—The mass culture of tubercle bacteria is washed repeatedly, agitated again in water, washed, ground to complete disintegration, extracted repeatedly with water, and the water insoluble material, instead of being ground to form a suspension in water as in New Tuberculin T. R. Liquid, is dried. The dried material is thoroughly mixed with a suitable diluent. Each tablet represents a definite amount of dried tubercle bacilli.

Tablets Tuberculin T. R. (P. D. & Co.)—New Tuberculin T. R. Dried, marketed in vials No. 1 of ten tablets, each tablet containing 0.0001 mg.; in vials No. 2 of ten tablets, each tablet containing 0.001 mg.; in vials No. 3 of ten tablets, each tablet containing 0.01 mg.; in vials No. 4 of ten tablets, each tablet containing 0.1 mg.; in vials No. 5 of ten tablets, each tablet containing 1 mg.; also marketed in packages of five vials, Nos. 1, 2, 3, 4 and 5, inclusive. Parke, Davis & Co., Detroit. (Journal A. M. A., October 6, 1923, p. 1207.)

Sal-Ethyl—A brand of ethyl salicylate (N. N. R.). For a discussion of the actions, uses and dosage of ethyl salicylate, see New and Non-official Remedies, 1923, p. 272. Sal-Ethyl is supplied in the form of Sal-Ethyl Capsules, 5 minims. Parke, Davis & Co., Detroit. (Journal A. M. A., October 13, 1923, p. 1285.)

Antidysenteric Serum (P. D. & Co.)—An antidysenteric serum (see New and Non-official Remedies, 1923, p. 287), obtained from horses immunized against several strains of Shiga and Flexner types of dysentery bacilli. It is marketed in packages of one syringe containing 10 cc.; in packages of one vial containing 10 cc.; in packages of one vial containing 20 cc. Parke, Davis & Co., Detroit. (Journal A. M. A., October 20, 1923, p. 1363.)

PROPAGANDA FOR REFORM

(Reported by Council on Pharmacy and Chemistry of the A. M. A.)

J. T. Ainslie Walker's Latest Intestinal Disinfectant—About a year ago a flood of reprints mailed from London reached the editors of American medical journals and others. The reprint dealt with "A New Suggestion in the Treatment of Puerperal Eclampsia," by Captain J. T. Ainslie Walker. The reprint was to the effect that as "the problem of intestinal disinfection has been solved," rational treatment of the condition was greatly simplified, but it was not stated how the problem of intestinal disinfection had been solved. A few months later the same editors received reprints which dealt with "Dimol" in the treatment of summer diarrhea in infants, and an article by A. N. M. Davidson. Still more recently American medical editors have received a pamphlet mailed from England which purports to be a book sent for review. This pamphlet is an obvious puff for Dimol by J. T. Ainslie Walker. Dimol is a preparation introduced by J. T. Ainslie Walker of England, and is sold in this country by the Anglo-French Drug Co. Some time ago Mr. Walker was connected with the Barrett Manufacturing Co. to exploit "Pyxol," a proprietary disinfectant resembling compound solution of cresol. Later Mr. Walker introduced his first "intestinal germicide" under the proprietary name "Trimethol." This preparation, which was reported on unfavorably by the Council on Pharmacy and Chemistry, appears to have been very similar to the product now exploited as Dimol. Mr. Walker would have us believe they are different, but the American agent of Dimol makes this claim: "Dimol is the registered name for the product known in the U. S. A. in 1914 under the name 'Trimethol.'" (Journal A. M. A., October 6, 1923, p. 1224.)

Colorless Iodin Preparations—The so-called colorless iodin preparations do not contain iodin in the free state, but some form of combined iodin, chiefly iodid. For instance, Tinctura Iodi Decolorata, N. F., is a solution of sodium iodid and ammonium iodid, obtained by mixing iodin and sodium thiosulphate, stronger ammonia water and alcohol. When tincture of iodin is used externally, it is with the view of obtaining the therapeutic action of free iodin. Since the colorless iodin preparations do not contain free iodin, their external use as a substitute for tincture of iodin is irrational. When tincture of iodin is given internally, the free iodin contained in it is converted into iodid before absorption. Therefore, tincture of iodin and the so-called colorless iodin preparations given internally have essentially the same therapeutic effect. However, if a colorless iodin preparation is to be administered, it would be simpler and more rational to administer sodium iodid. (Journal A. M. A., October 20, 1923, p. 1383.)

Veiled Eugenic Truths—It sometimes seems to us that altogether too much is inferred from the lugubrious family histories that the eugenists are so fond of detailing. They look pretty bad to the unsophisticated, meaning by the unsophisticated those who know little or nothing about genealogical research, and it is hard to see, from the hard-boiled eugenic point of view, how the present-day representatives of these "tainted" lines can be anything but degenerates.

What we mean is this, that to the sophisticated these queer lines are rather meaningless, since genealogical research shows that some of the most distinguished persons now living have had very crooked ancestry, from a eugenic or any other point of view. We are not going to give any of these esteemed citizens away, merely to prove our point, but we appeal to the reader not to be too much impressed by the dreadful family histories aforesaid, which may possess less sinister implications for present-day representatives than the eugenists fancy.—(Editorial, The Medical Times, November, 1923.)

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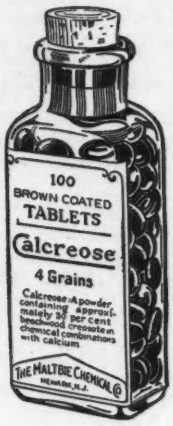

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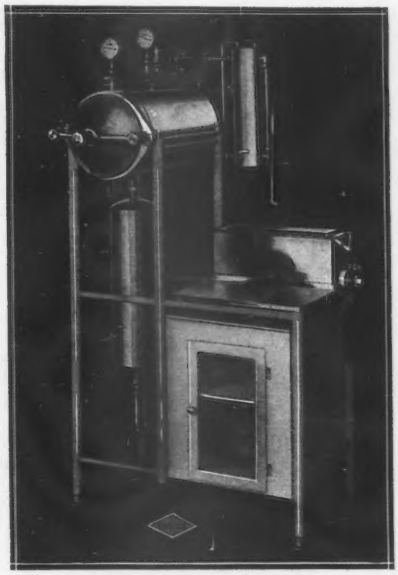

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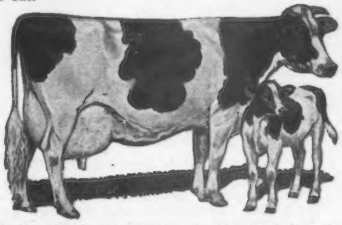

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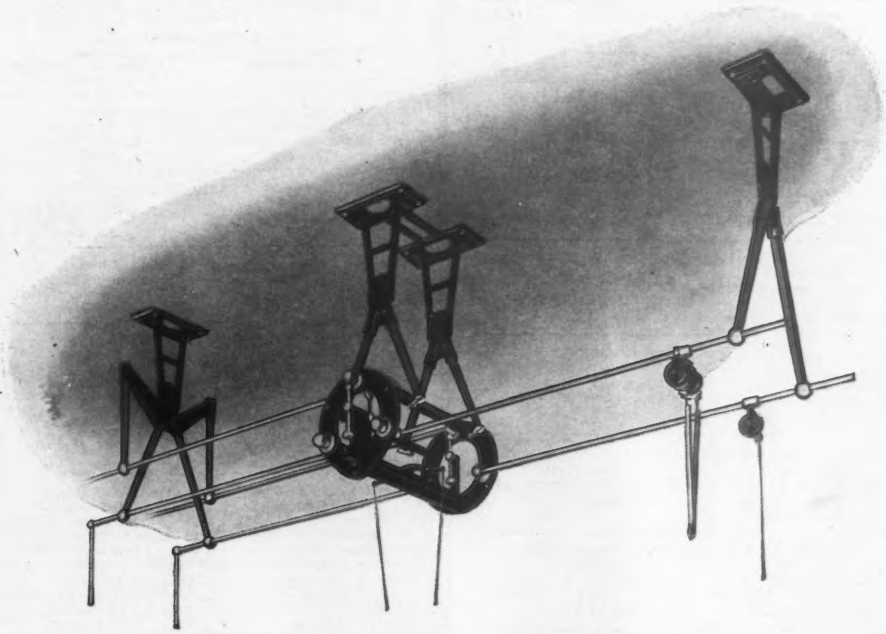

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ANNUAL MEETING

Los Angeles, May 13, 1924

Members desiring to read papers should communicate with appropriate section officers, as listed above.

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2545 Regent Street, Berkeley, Calif.

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Belmont, Calif.

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ANDERSON SANATORIUM
Mental and Nervous Diseases
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BANKSIA PLACE SANITARIUM
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For the Treatment of Tuberculosis
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CANYON SANITARIUM
For the Treatment of Tuberculosis
Redwood City, Calif.

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For the Treatment of Tuberculosis
Colfax, Calif.

COLFAX SCHOOL FOR THE TUBERCULOUS
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MONROVIA CLINIC
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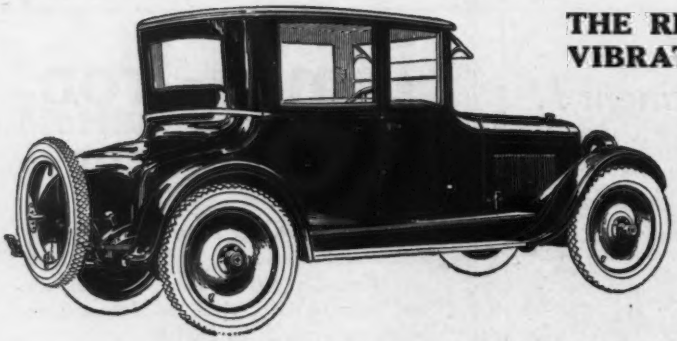

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The Classification of Heart Pain—Heart pain is classified by Paul D. White and J. Edwin Wood, Boston (Journal A. M. A., August 18, 1923), as follows: 1. Simple fatigue pain; (a) Chronic hypertension; (b) aortic stenosis or regurgitation; (c) mitral stenosis; (d) pulmonic stenosis—congenital heart disease; (e) adherent pericarditis; (f) paroxysmal tachycardia or paroxysmal auricular fibrillation or flutter; (g) permanent auricular fibrillation or flutter with high ventricular rate, and (h) permanent coronary narrowing due to arteriosclerosis. 2. Nervous heart pain, including effort syndrome. 3. Paroxysmal heart pain (probably of coronary disease or irritability), the so-called true angina pectoris. 4. Pain of coronary thrombosis. 5. Aortic pain, of syphilitic aortitis and aneurysm. 6. Pain of pericarditis. Frequently, combinations of these factors occur.

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Hospital Records—State and Federal laws require the accurate keeping of records in all the banking institutions of this country. In order to see that this law is strictly carried out, inspectors are employed and required to make frequent visits to banks over the country to look into and make rigid examinations of all records. In case of violation of this law the code provides adequate punishment. If this record keeping is so important in commercial institutions, why is it not vastly more important in institutions entrusted with the care of life and health of human beings?

It has been my experience over many years of hospital attachment, both in civil and military life, that the hospital attendants responsible for record keeping look upon such work more or less as drudgery, and work that should be delegated to clerks or employes of inferior rank. This is a mistaken idea, for the act of keeping records, when once the spirit of record keeping has thoroughly permeated an institution, is not a troublesome undertaking, but on the other hand is amusing and becomes to be an act enjoyed by members of the staff who are thoroughly conscientious in their work. Record keeping should be a part of the program of teaching in every institution. First the importance of record keeping to the institution, both present and future, and not only to the institution, but the surrounding country which the institution serves, and finally the nation, should be emphasized. After the importance of record keeping has been thoroughly drilled into the staff, the actual method of making the record should be taught. It has been my experience that the hardest thing to do in making records is to instill in the historian the act of brevity and conciseness, stating facts in a few words relative to the patient's condition.—(C. S. Lawrence, Southern Medicine and Surgery.)

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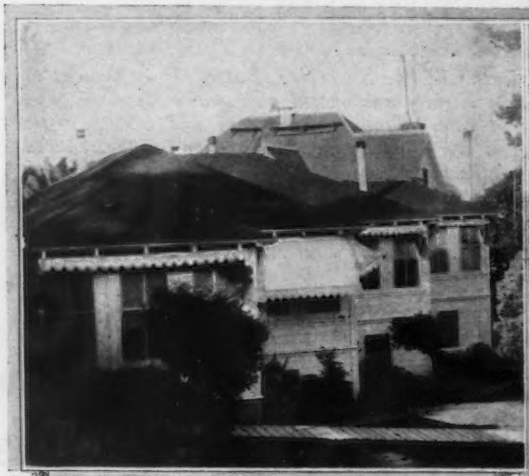

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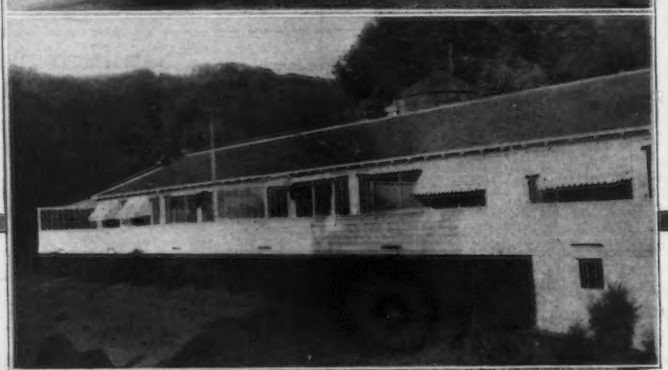

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